

AWARD NUMBER: W81XWH-14-2-0126

TITLE: Characterization of Human Torso Vascular Morphometry in Normotensive and Hypotensive Trauma Patients

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REPORT DATE: July 2016

TYPE OF REPORT: Annual Technical Report

PREPARED FOR: U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012

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REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE JULY 2016		2. REPORT TYPE Annual Report		3. DATES COVERED 06/30/2015-06/29/2016	
4. TITLE AND SUBTITLE  Characterization of Human Torso Vascular Morphometry in Normotensive and Hypotensive Trauma Patients				5a. CONTRACT NUMBER W81XWH-14-2-0126	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)  Stewart C. Wang  E-Mail: stewartw@umich.edu				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  University of Michigan Michigan 3003 S. State St. Ann Arbor, MI 48109-1274				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)  U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT  Approved for Public Release; Distribution Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT Non-compressible torso hemorrhage remains the leading cause of preventable death on the battlefield and a leading cause of death in civilian centers. The purpose of this project is to provide basic morphometric understanding of aortic and vena caval anatomy as it relates to the rest of the body with the goal of enabling the use of various occlusion catheters that can control bleeding in non-compressible torso injuries in the field. One year into the project, we have identified and processed the base morphometrics and much of the aortic and vena caval measurements for the 2000 civilian CT scans. Additionally, we have developed a machine-learning algorithm for aortic identification that will speed processing and reduce inter- and intra-user variability. Regarding the military scans, we have secured HRPO IRB approval and are actively working on a process for receiving military CT scans. Finally, we have begun planning our data analysis and have executed pilot assessments to validate the approach.					
15. SUBJECT TERMS Trauma, Endovascular, Thoracic, Abdominal, Aorta, Morphometry					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT  Unclassified	18. NUMBER OF PAGES  117	19a. NAME OF RESPONSIBLE PERSON USAMRMC
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified			19b. TELEPHONE NUMBER (include area code)

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## 1. INTRODUCTION:

Our research group has developed advanced technical capabilities to quantitatively measure anatomic characteristics in traumatically injured patients. In a previous DOD study, we noted clear differences between men (n=400) and women (n=170). We also noted significant racial differences in the correlation between body habitus and aortic dimensions as well as differences with age and body habitus. We hypothesize that aortic and venous dimensions differ with the hemodynamic status of the injured person as well as their gender, race, body habitus and age. Better characterization of *these differences* is necessary to guide optimal field inflation of occlusive balloon catheters or other hemorrhage control devices for the treatment of battlefield casualties; and better characterization of *the corresponding dimensions* will support the development of occlusion devices that optimally limit hemorrhage while minimizing complications. Specifically, we aim to develop accurate measurements for aortic and vena caval dimensions based on hemodynamic status, body habitus, gender and age in the civilian population; and subsequently we will translate these findings to the military population and create accurate nomograms for catheter design, catheter insertion and balloon inflation based on hemodynamic status, body habitus, gender and age.

## 2. KEYWORDS:

Provide a brief list of keywords (limit to 20 words).

- Trauma
- Endovascular
- Thoracic
- Abdominal
- Aorta
- Morphometry
- Vena Cava
- Machine Learning
- Hemorrhage
- Catheter
- Hypotension
- Balloon Occlusion

## 3. ACCOMPLISHMENTS:

### 1.1.1: Identify 2000 Civilian CTs (06/30/14-10/30/14)

Current Objectives:

The goal for this task is to identify Computed Tomography (CT) scans from 2000 civilians between the ages of 18 and 50 from which we will extract aorta and vena cava measurements of length and dimension, as well as muscle, fat, bone, and organ morphomic measures and hemodynamic status (blood pressure and heart rate).

- **Results, Progress and Accomplishments (with Discussion):**  
This task is complete. This study originally included 2,247 patients who underwent CT imaging following traumatic injury between 2000-06-11 and 2015-03-30. There were 478 exclusions (21.2%) due to incomplete chest, abdomen, pelvis, and femoral imaging. The final cohort was composed of 1769 patients with a mean (SD) age of 32.7 (10.2) and a median (IQR) torso extent of 557.4 mm (537-579 mm). There were 1270 (71.8%) male patients and 75 (4.2%) patients identified as hypotensive. For the purposes of the study, hypotensive was defined as blood pressure less than 100 and pulse over 100 at the time of emergency department trauma admission.
- **Key Methodology:**  
Using the PGAdmin query tool, we married the data from the University of Michigan trauma registry with the University of Michigan radiology database to identify patients who were transported to the Emergency Department for a traumatic injury or admitted the University of Michigan Hospital System (UMHS) and who received a CT scan for clinical purposes.
- **Opportunities for Training and Professional Development:**  
Nothing to Report
- **Dissemination of Results to Communities of Interest:**  
Nothing to Report
- **Data:**  
See APPENDIX A: Civilian Patient List

### **1.3 Develop Aorta Algorithm (06/30/14-10/30/14)**

- **Current Objectives:**  
Segment the full aorta from the arch to the bifurcation points, and then post-process with MATLAB® to identify the multiple critical vessel branch-points for diameter and length measurements.
- **Results, Progress and Accomplishments (with Discussion):**  
The algorithms for the automatic segmentation of the aorta have been developed and meet our target accuracy measures (currently we are achieving an average 90% accuracy rate with our fully-automated machine learning approach). This method has greatly improved the throughput and provided a level of consistency that overcomes any inter- and intra-user variability.
- **Key Methodology:**  
Using a novel approach for identifying and capturing morphomic data from CT scans, we have developed a machine learning technique for extracting the aortic structures in a more automated fashion. This entails creating algorithms that search for circular structures in a region of interest and then reference the slices above

and below to validate the selection. Once the main aortic structure is identified, we lay in a centerline and use a post-processing, user-guided algorithm developed in MATLAB® to mark femoral head cut point (left and right), iliac (left and right), bifurcation point, renal arteries (left and right), superior mesenteric, celiac (inferior and superior), and left subclavian artery. Following this identification step, measurements of diameter and lengths (total and between the branch points) are stored in the database.

- Opportunities for Training and Professional Development:  
Nothing to Report
- Dissemination of Results to Communities of Interest:  
Nothing to Report
- Data:  
See Appendix B: Vascular Processing  
See also Appendix C: Machine Learning

#### **1.1.2: Identify 50 ECG-gated CTs (11/03/14-12/12/14)**

- Current Objectives:  
To determine the normal change in aortic/vena caval geometry and dimensions at different locations during the cardiac cycle, we are also analyzing a cohort (n=50) of subjects who have undergone ECG-gated CT scans to determine the change in aortic geometry and dimensions at different aortic locations during the cardiac cycle. Hemodynamic data is available for these patients from the time of CT scanning. This information will be essential for optimal design of catheter balloons that have the appropriate mechanical properties to occlude flow without causing aortic rupture or dissection at different stages of the cardiac cycle.
- Results, Progress and Accomplishments (with Discussion):  
We have successfully identified this subset of patients. This task is complete.
- Key Methodology:  
To identify these patients we used the PGAdmin query tool find patients in the trauma population who underwent an ECG-gated CT scan. Once selected, downloaded, and de-identified, these scans are then separated into the multiple cardiac phases to enable our algorithms to process each stage individually. Once this is complete, we run each phase through our automated and post-processing steps.
- Opportunities for Training and Professional Development:  
Nothing to Report
- Dissemination of Results to Communities of Interest:  
Nothing to Report

- Data:  
See Appendix D: Phase Overlay & Gated Radius Graph  
See also Appendix A: Civilian Patient List

### **1.1.3: Identify 75 Internal Injury & Hypotensive CTs (11/03/14-01/02/15)**

- Current Objectives:  
To determine the effect of internal hemorrhage and hypovolemia on aortic/vena caval dimensions and geometry, we are analyzing an additional cohort of civilian trauma patients with significant internal hemorrhage and with/without hemodynamic instability (n=75). Comparing patients with arterial versus venous bleeding (as determined by active contrast extravasation) as well as differing locations of hemorrhage (chest, abdomen, pelvis). In the past, it was extremely rare to scan a hypotensive trauma patient as they were rushed to the OR. However, with the recent widespread adoption of ultrasound to rule out pericardial, pleural, and abdominal fluid in combination with continued use of chest and pelvis radiographs to rule out significant thoracic and pelvic hemorrhage, more and more hypotensive blunt trauma patients (primarily from high energy motor vehicle crashes) are undergoing CT scanning with continued resuscitation to define their internal injuries rather than proceeding to the OR for blind surgical exploration. It is this population that provided the 75 scans needed for this task.
- Results, Progress and Accomplishments (with Discussion):  
We have successfully identified this subset of patients. This task is complete.
- Key Methodology:  
To identify these patients we used the PGAdmin query tool find patients in the trauma population with internal hemorrhage and hypovolemia. Once selected, downloaded, and de-identified, we will determine whether the patient had arterial versus venous bleeding (as determined by active contrast extravasation) as well as the differing locations of hemorrhage (chest, abdomen, pelvis).
- Opportunities for Training and Professional Development:  
Nothing to Report
- Dissemination of Results to Communities of Interest:  
Nothing to Report
- Data:  
See Appendix A: Civilian Patient List

### **1.4: Develop Vena Cava Algorithm (09/01/14-02/13/15)**

- Current Objectives:  
Better characterization of the differences in vena caval dimensions and lengths is necessary to guide optimal field inflation of occlusive balloon catheters or other hemorrhage control devices for the treatment of battlefield casualties. Better characterization of these dimensions will support the development of occlusion

devices that optimally limit hemorrhage while minimizing complications.

- **Results, Progress and Accomplishments (with Discussion):**  
We have developed a user-guided algorithm to process the vena cava. This task is complete.
- **Key Methodology:**  
We have begun manual segmentation of Vena Cava of civilian patients. This process involves placing points on the interior of the vena cava and then using a “growing” algorithm to find the edges. We attempted development of a more automated process but the variation of the vena cava dimension and shape resulted an algorithm that was not accurate enough to make the process useful. We then developed a tool to measure the maximum and minimum diameter of a cross-section of the vena cava, from which we will derive area and volume variability across the population.
- **Opportunities for Training and Professional Development:**  
Nothing to Report
- **Dissemination of Results to Communities of Interest:**  
Nothing to Report
- **Data:**  
See Appendix B: Vascular Processing

## **1.2: Capture Civilian Demographics (11/03/14-03/06/15)**

- **Current Objectives:**  
To identify the variability in aortic and vena caval dimensions without the need for 3-D imaging in the field. Our objective is to develop nomograms that take into account age, sex, race, weight, and height, as well as external measurements that we can extrapolate for our base morphometrics measurements.
- **Results, Progress and Accomplishments (with Discussion):**  
We have identified all demographics of our civilian population that are possible. This task is complete.
- **Key Methodology:**  
We leveraged the University of Michigan trauma registry and the electronic medical records system at University of Michigan Health System to extract the demographics data on our selected civilian patient population. Using the PGAdmin query tool, we extracted age, sex, race (when available), blood pressure, and heart rate for each patient from our identified group (transported to the Emergency Department for a traumatic injury or admitted the University of Michigan Health System and who received a CT scan for clinical purposes).



- Opportunities for Training and Professional Development:  
Nothing to Report
- Dissemination of Results to Communities of Interest:  
Nothing to Report
- Data:  
See Appendix A: Civilian Patient List

### **1.5: Process Base Morphomics for Civilian Population (09/01/14-03/27/15)**

- Current Objectives:  
We will use our base morphomic measurements in body circumference, fat, muscle, bone, organs, etc. to record measurement of body habitus for the civilian trauma population. These data will then be connected with demographics and vasculature measures to feed our development of nomograms for vasculature.
- Results, Progress and Accomplishments (with Discussion):  
All base morphomics have been processed for the civilian scans we have identified. This task is complete.
- Key Methodology:  
Morphomics is based on highly automated, high-throughput image processing to quantify anatomically indexed measures from a single patient's scan, offering remarkable opportunities for personalized treatment. Each patient's individual morphometric qualities are then assessed against population-based standards to identify patient-specific risk factors. Morphomic assessment of trunk musculature (density and mass), spine, psoas (area and quality), fascia, skin, fat, body circumference and eccentricity, dorsal muscle group, bone mineral density, and solid organ morphomic measures have demonstrated that these patient-specific variables dominate risk prediction models using proven techniques for the University of Michigan Morphomic Analysis Group.
- Opportunities for Training and Professional Development:  
Nothing to Report
- Dissemination of Results to Communities of Interest:  
Nothing to Report
- Data:  
See Appendix E: Morphomics Overview

### **1.6: Process Aorta for Civilian Population (09/22/14-10/02/15)**

- Current Objectives:  
To determine a baseline for our nomogram development, we are leveraging our custom algorithm to extract length and diameter measurements as well as branch point locations for 2000 civilian CTs.

- **Results, Progress and Accomplishments (with Discussion):**  
We have processed 1716 aortas from normotensive civilian CTs thus far. We have developed and tested a reliable machine-learning based automatic processing method. This task is complete.
- **Key Methodology:**  
Using a novel approach for identifying and capturing morphomic data from CT scans, we have developed a machine learning technique for extracting the aortic structures in a more automated fashion. This entails creating algorithms that search for circular structures in a region of interest and then reference the slices above and below to validate the selection. Once the main aortic structure is identified, we lay in a centerline and measure the radius. Then, using a post-processing, user-guided algorithm developed in MATLAB®, we mark the femoral head cut point (left and right), iliac (left and right), bifurcation point, renal arteries (left and right), superior mesenteric, celiac (inferior and superior), and left subclavian artery. Following this identification step, measurements of diameter and lengths (total and between the branch points) are stored in the database.
- **Opportunities for Training and Professional Development:**  
Nothing to Report
- **Dissemination of Results to Communities of Interest:**  
Nothing to Report
- **Data:**

<i>AORTA</i>	<i>Centerline</i>	<i>Radii</i>	<i>Landmarks</i>	<i>Full Volumes</i>
Normotensive	1716	1716	1716	563
Hypotensive	78	78	78	14

### 1.7: Process Vena Cava for Civilian Population (01/05/15-01/15/16)

- **Current Objectives:**  
To determine a baseline for our nomogram development, we are leveraging our custom algorithm to extract length as well as minor and major diameter measurements, branch point locations, and volume for a 5 cm section of the vena cava.
- **Results, Progress and Accomplishments (with Discussion):**  
This task is complete.
- **Key Methodology:**  
Points within the vena cava are placed manually, and then a line is derived. Landmarks (right and left iliac, inferior and superior bifurcation, left and right

renal, supra hepatic, and IVC heart junction) are identified on the scans and recorded in the database. A custom algorithm is then run to determine the major and minor axis of the vena cava, providing insight into its eccentricity and level of collapse. Finally a 5cm segment is identified on a representative sample, and volume is derived to provide further data on the condition of the vena cava.

- Opportunities for Training and Professional Development:  
Nothing to Report
- Dissemination of Results to Communities of Interest:  
Nothing to Report
- Data:

<i>VENA CAVA</i>	<i>Landmarks</i>
Normotensive	1707
Hypotensive	78

### 1.8: Civilian Analysis (12/07/15-04/08/16)

- Current Objectives:  
Hemodynamic data, in conjunction with age, gender, height, weight, and Body Mass Index (BMI) data as well as analytic morphomic data (distances between bony landmarks, body composition, and cross sectional area and circumference, etc.) will be analyzed with the aortic/vena caval data to determine nomograms for optimal balloon insertion and inflation targets.
- Results, Progress and Accomplishments (with Discussion):  
For the civilian population, we have computed descriptive statistics of means, standard deviations, and percentiles for (1) arterial distances (lengths) and (2) arterial diameters by gender and age. We fit linear regression models employing gender, age, and torso extent as covariates to predict the distance to arterial zones of interest. Aortic Zone I extended from the origin of the left subclavian artery to the celiac trunk, and Aortic Zone III is composed of the infrarenal aorta (lowest renal to the aortic bifurcation). Analysis of arterial tortuosity and descriptive statistics of venous dimensions are ongoing.
- Key Methodology:  
We will use the tool, Tableau, to analyze the data we have acquired.
- Opportunities for Training and Professional Development:  
Nothing to Report

- Dissemination of Results to Communities of Interest:  
Nothing to Report
- Data:  
See Appendix F: Initial Data Analysis

### **2.1: Arrange Access to Military CTs in San Antonio (01/02/15-06/19/15)**

- Current Objectives:  
Arrange for access to 500 warfighter CTs for the third aim of this grant.
- Results, Progress and Accomplishments (with Discussion):  
Although, we previously assisted military personnel at the Army Institute for Surgical Research (AISR) in developing a system to load, select, and de-identify scans and visited AISR at Fort Sam Houston to advance this effort, the technical team at AISR has encountered a new issue when applying this approach to the production environment. In April we sent one of our staff to liaise with the technical staff at AISR at Fort Sam Houston to help resolve some of these new technical issues. We have identified an AISR medical staff member, Dr. Sahar Leazer, to help with identification of appropriate scans at AISR and to ensure IRB compliance. We continue to offer support to overcome this obstacle.
- Opportunities for Training and Professional Development:  
Nothing to Report
- Dissemination of Results to Communities of Interest:  
Nothing to Report
- Key Methodology:  
Following DOD protocol. See APPENDIX G: CRADA

### **2.2: Identify 500 CTs from Military Population (SOW #2.2, 06/19/15-10/23/15)**

- This task is on hold until we can resolve SOW 2.1 (above).

### **Activities for Next Reporting Period**

#### **Budget Issues**

- Verify approval of No Cost Extension to allow for a resolution of the technical problem retrieving scans from AISR

#### **Civilian Population**

- Finalize nomograms for testing against military population

#### **Military Population**

- Gain access to Military CTs (VPN or CDs, AISR IRB)
- Support identification of 500 warfighter CTs

- Receive scans and demographics on military scans
- Process base morphomics on military scans
- Process aorta on military scans
- Process vena cava on military scans

Prepare final analysis report

#### **4. IMPACT:**

“Nothing to report.”

#### **5. CHANGES/PROBLEMS:**

- Access to the military CT scans remains a roadblock. We provided the IT team in San Antonio with a custom software solution that should have allowed this task to be completed, but a new technical difficulty has once again left us behind on processing. Without the military scans to begin processing, we have finished the processing of the civilian scans and demographics as well as the analysis design. The analysis of the civilian data is nearly complete.

This continuing difficulty with access to military scans has had a negative impact on the timeline. Thus, we have filed for a no cost extension to be able to fulfill the terms of the grant.

- As we have reported in the past, obtaining racial/ethnic demographic information is a difficult task. Reports of these data in patient records are self-reported and therefore unreliable and sometimes omitted. In response, we performed a manual search of medical records and reduced the null values in the race field to 28 of 1796 CTs reviewed. This small number will not impact the study statistically.

#### **6. PRODUCTS:**

- Publications, conference papers, and presentations  
“Nothing to report.”
- Journal publications  
“Nothing to report.”
- Books or other non-periodical, one-time publications  
“Nothing to report.”
- Other publications, conference papers, and presentations  
“Nothing to report.”
- Website(s) or other Internet site(s)  
“Nothing to report.”

- Technologies or techniques  
“Nothing to report.”
- Inventions, patent applications, and/or licenses  
“Nothing to report.”
- Other Products  
“Nothing to report.”

## 7. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS:

Name:	<i>Stewart C. Wang, MD PhD</i>
Project Role:	<i>PI</i>
Nearest person month worked:	3
Contribution to Project:	<i>Dr. Wang is the Principal Investigator on this grant, with expertise in morphomics.</i>
Funding Support:	

Name:	<i>Jonathan Eliason, MD</i>
Project Role:	<i>Co-Investigator</i>
Nearest person month worked:	1
Contribution to Project:	<i>Dr. Eliason is the Co-Investigator on this grant with expertise in vascular surgery.</i>
Funding Support:	

Name:	<i>Nicholas Wang</i>
Project Role:	<i>Research Associate</i>
Nearest person month worked:	9
Contribution to Project:	<i>Nick Wang developed algorithms for image extraction and processing.</i>
Funding Support:	

Name:	<i>Binu Enchakalody</i>
Project Role:	<i>Research Associate</i>
Nearest person month worked:	9
Contribution to Project:	<i>Binu Enchakalody developed algorithms for image extraction and processing.</i>
Funding Support:	

Name:	<i>June Sullivan</i>
-------	----------------------

Project Role:	<i>Project Manager</i>
Nearest person month worked:	3
Contribution to Project:	<i>June Sullivan is responsible for defining the tasks and verifying quality and completion.</i>
Funding Support:	

Name:	<i>Peng Zhang, PhD</i>
Project Role:	<i>Biostatistician</i>
Nearest person month worked:	2
Contribution to Project:	<i>Peng Zhang is responsible for development of the statistical models for this grant.</i>
Funding Support:	

Name:	<i>Brian Derstine</i>
Project Role:	<i>Data Analyst</i>
Nearest person month worked:	12
Contribution to Project:	<i>Brian Derstine will ensure validity of all imaging and medical data and will manage the execution of analyses as well as preparation and dissemination of reports.</i>
Funding Support:	

Name:	<i>Pat Rabban</i>
Project Role:	<i>Research Associate</i>
Nearest person month worked:	10
Contribution to Project:	<i>Pat Rabban is responsible for processing the morphomics using existing algorithms.</i>
Funding Support:	

Name:	<i>Honglak Lee, PhD</i>
Project Role:	<i>Engineering Faculty Lead</i>
Nearest person month worked:	1
Contribution to Project:	<i>Dr. Lee is responsible for overseeing machine learning development on this grant.</i>
Funding Support:	

Name:	<i>Xinchen Yan</i>
Project Role:	<i>EECS Graduate Student Research Assistant</i>
Nearest person month worked:	12

Contribution to Project:	<i>Xinchen Yan is responsible for implementation of machine learning on this grant.</i>
Funding Support:	

- Change in Active Support of PIs:  
“Nothing to Report.”
- Other Partner Organizations

Organization Name:	<i>Army Institute of Surgical Research (AISR)</i>
Location of Organization	<i>Ft. Sam Houston, San Antonio, TX</i>
Partner's Contribution to Project:	<i>In-Kind: Provision of 500 military CTs and corresponding medical information</i>  <i>Collaboration: Sahar Leazer, MD at AISR will identify and provide the required military CTs</i>

## 8. SPECIAL REPORTING REQUIREMENTS:

See Appendix H: Quad Chart

## 9. APPENDICES:

- Appendix A: Civilian Patient List
- Appendix B: Vascular Processing Videos
- Appendix C: Machine Learning
- Appendix D: Phase Overlay & Gated Radius Graph
- Appendix E: Morphomics Overview
- Appendix F: Initial Data Analysis
- Appendix G: CRADA
- Appendix H: Quad Chart



# APPENDIX A

## Civilian Patient List

studyid	studydescription	age	race	sex	ed_arrival_dttm	ed_bp	ed_pulse	tag_contents
0	CHEST ABDOMEN PELVIS	47	White	M	10/20/01 19:07	151	79	DOD vascular
2	CHEST ABDOMEN PELVIS	22	White	M	6/15/02 1:17	133	106	DOD vascular
3	CHEST ABDOMEN PELVIS	46	White	M	2/20/03 9:01	86	53	DOD vascular
5	CHEST ABDOMEN PELVIS	30	White	M	4/4/04 6:07	124	73	DOD vascular
6	CHEST ABDOMEN PELVIS	31	White	M	4/24/04 5:45	144	100	DOD vascular
7	CHEST ABDOMEN PELVIS	33	White	M	1/6/02 22:31	135	70	DOD vascular
10	CHEST ABDOMEN PELVIS	21	White	M	10/31/01 17:49	136	97	DOD vascular
15	CT THORAX W IV CONTRAS	43	White	M	11/18/05 21:51	104	86	DOD vascular
22	CHEST ABDOMEN PELVIS	40	White	M	6/22/03 7:15	112	96	DOD vascular
29	CHEST ABDOMEN PELVIS	36	White	M	1/5/04 8:52	134	69	DOD vascular
32	CHEST ABDOMEN PELVIS	35	White	M	7/6/03 23:55	206	107	DOD vascular
36	CHEST ABDOMEN PELVIS	20	White	M	9/1/02 0:01	106	95	DOD vascular
37	CHEST ANDOMEN PELVIS	22	Black	M	1/8/03 0:57	143	96	DOD vascular
47	CHEST ABDOMEN PELVIS	27	White	M	1/21/02 7:16	120	66	DOD vascular
53	CT THORAX W IV CONTRAS	22	Black	M	7/18/06 18:07	105	79	DOD vascular
54	CHEST ABDOMEN PELVIS	40	White	M	4/19/06 20:15	128	102	DOD vascular
56	CT THORAX W IV CONTRAS	48		F	6/6/05 1:31	135	82	DOD vascular
64	CT ABDOMEN W IV CONTRA	40	White	M	9/24/05 21:20	146	131	DOD vascular
66	CHEST ABDOMEN PELVIS	28	White	F	8/3/06 17:15	110	75	DOD vascular
67	CHEST ABDOMEN PELVIS	30	White	M	10/23/07 3:28	104	140	DOD vascular
70	CHEST ABDOMEN PELVIS	32	Black	M	2/16/07 2:00	150	117	DOD vascular
74	CHEST ABDOMEN PELVIS	28	Asian	F	11/30/06 14:11	99	79	DOD vascular
83	CHEST ABDOMEN PELVIS	31	White	M	7/17/02 1:12	162	99	DOD vascular
88	CHEST ABDOMEN PELVIS	50	White	M	1/23/04 8:26	145	93	DOD vascular
89	CHEST ABD PELVIS	46	White	M	2/4/04 16:57	143	90	DOD vascular
91	CHEST ABDOMEN PELVIS	24	White	M	2/27/06 8:20	136	126	DOD vascular
92	CHEST ABDOMEN PELVIS	32	White	M	7/23/04 1:36	90	95	DOD vascular
114	CHEST ABDOMEN PELVIS	37	White	M	5/28/08 8:51	127	90	DOD vascular
118	CT ABDOMEN W IV CONTRA	31	White	F	9/24/05 21:02	133	81	DOD vascular
121	CHEST ABDOMEN PELVIS	43	White	F	6/13/05 11:19	155	86	DOD vascular
124	CT ABDOMEN W IV CONTRA	24	White	M	7/31/05 3:34	112	102	DOD vascular
131	CHEST ABDOMEN PELVIS	23	White	M	7/26/06 8:08	142	82	DOD vascular
132	CHEST ABDOMEN PELVIS	23	White	M	10/9/03 0:23	140	122	DOD vascular
133	CT THORAX W IV CONTRAS	24	White	M	4/1/06 0:29	139	77	DOD vascular
135	CHEST ABDOMEN PELVIS	46	White	F	1/11/06 23:16	145	102	DOD vascular
146	CT THORAX W IV CONTRAS	46	White	M	11/18/06 20:45	138	95	DOD vascular
147	CHEST ABDOMEN PELVIS	19	White	F	10/29/06 4:10	144	92	DOD vascular
149	CHEST ABDOMEN PELVIS	21	White	M	8/20/06 6:51	156	105	DOD vascular
151	CHEST ABDOMEN PELVIS	48	White	M	10/5/04 14:08	140	76	DOD vascular
154	CHEST ABDOMEN PELVIS	21	White	F	6/28/04 19:22	111	120	DOD vascular
158	CHEST ABDOMEN PELVIS	29	White	F	9/28/04 15:51	130	72	DOD vascular
160	CHEST ABDOMEN PELVIS	21	White	M	3/24/04 1:04	87	130	DOD vascular
164	CHEST ABDOMEN PELVIS	48	White	F	7/1/04 18:23	102	106	DOD vascular
165	CHEST ABD PELVIS	18	White	F	7/15/04 16:14	113	130	DOD vascular
176	CHEST ABDOMEN PELVIS	32	White	M	7/22/03 14:50	134	92	DOD vascular

182	CHEST ABDOMEN	47	White	F	11/21/03 6:32	117	84	DOD vascular
189	CHEST ABDOMEN PELVIS	25	Asian	F	5/9/03 14:28	111	83	DOD vascular
190	CHEST ABDOMEN PELVIS	28	White	F	10/10/03 17:08	119	124	DOD vascular
191	CHEST ABDOMEN PELVIS	44	White	F	10/22/03 8:52	103	88	DOD vascular
192	CHEST ABDOMEN PELVIS	25		F	12/26/03 3:41	129	120	DOD vascular
207	CHEST ABDOMEN PELVIS	29	White	F	10/23/06 2:37	151	96	DOD vascular
209	CHEST ABDOMEN PELVIS	38	White	F	7/31/03 18:06	119	123	DOD vascular
217	CHEST ABDOMEN PELVIS	21	White	F	5/20/02 22:12	154	112	DOD vascular
218	CHEST ABDOMEN PELVIS	38	White	F	6/14/02 1:01	144	100	DOD vascular
220	CHEST ABDOMEN PELVIS	46	Other	F	6/29/02 18:50	97	102	DOD vascular
221	CHEST ABDOMEN PELVIS	48	White	F	6/28/02 21:23	173	103	DOD vascular
223	CHEST ABDOMEN PELVIS	48	White	F	8/29/02 20:40	151	47	DOD vascular
228	CHEST ABDOMEN PELVIS	23	White	F	8/20/02 14:27	129	89	DOD vascular
235	CHEST ABDOMEN PELVIS	45	White	F	12/10/02 8:52	102	91	DOD vascular
249	CHEST ABDOMEN PELVIS	23	White	M	9/9/07 4:35	138	138	DOD vascular
251	CHEST ABDOMEN PELVIS	36	White	M	5/21/07 14:00	162	148	DOD vascular
253	CHEST ABDOMEN PELVIS	33	White	M	4/24/07 2:30	133	81	DOD vascular
256	CHEST ABDOMEN PELVIS	33	White	F	3/27/07 11:58	89	80	DOD vascular
262	CHEST ABDOMEN PELVIS	29	White	M	8/19/07 4:30	154	90	DOD vascular
263	CT HEAD WO IV CONTRAST	30	White	M	8/19/07 4:02	143	62	DOD vascular
264	CHEST ABDOMEN PELVIS	40	White	M	9/15/07 14:02	117	53	DOD vascular
265	CHEST ABDOMEN PELVIS	26	White	F	8/30/07 15:36	118	88	DOD vascular
268	CHEST ABDOMEN PELVIS	22	White	M	10/4/07 1:30	116	94	DOD vascular
427	CHEST ABDOMEN PELVIS	42	White	F	8/4/02 13:43	157	96	DOD vascular
493	ABDOMEN PELVIS	45	White	M	12/10/02 10:51	159	78	DOD vascular
500	CHEST ABDOMEN PELVIS	18	White	M	10/23/04 17:01	114	63	DOD vascular
515	ABDOMEN	42	White	M	12/2/04 1:29	146	93	DOD vascular
519	CHEST ABDOMEN PELVIS	19	White	M	7/15/08 17:45	119	87	DOD vascular
522	CHEST ABDOMEN PELVIS	50	White	F	1/23/08 12:17	100	107	DOD vascular
526	CHEST ABDOMEN PELVIS	18	White	M	6/21/08 6:50	130	144	DOD vascular
527	CHEST ABDOMEN PELVIS CT ABDOMEN W	48	Black	F	4/6/08 20:15	84	97	DOD vascular
530	CONTRAST=AB	49	White	F	6/28/08 14:15	138	88	DOD vascular
538	ABDOMEN	49	White	F	10/8/04 21:07	147	85	DOD vascular
554	CT THORAX W IV CONTRAS	21	White	M	8/9/08 8:15	129	78	DOD vascular
558	CT THORAX W IV CONTRAS	25	White	F	7/7/06 10:12	114	100	DOD vascular
559	CT THORAX W IV CONTRAS	25	White	M	2/20/06 5:15	82	145	DOD vascular
577	CHEST ABDOMEN PELVIS	48		F	9/22/04 8:58	139	73	DOD vascular
581	CHEST ABDOMEN PELVIS	19	White	M	9/26/04 2:28	135	122	DOD vascular
589	CHEST ABDOMEN PELVIS	44	Other	F	8/24/04 16:20	102	60	DOD vascular
590	CHEST ABDOMEN PELVIS	20	White	M	9/2/04 23:55	115	107	DOD vascular
591	CHEST ABDOMEN PELVIS	19	White	F	7/12/04 17:21	121	101	DOD vascular
593	CHEST ABDOMEN PELVIS	39	White	M	7/24/04 16:45	146	75	DOD vascular
602	CHEST ABDOMEN PELVIS	40	Black	M	7/4/04 13:51	165	81	DOD vascular
605	CHEST ABDOMEN PELVIS	48	White	M	6/3/04 18:41	117	76	DOD vascular
608	CHEST ABDOMEN PELVIS	21	White	F	6/3/04 18:07	132	110	DOD vascular

617	CHEST ABDOMEN PELVIS	22	White	M	7/10/03 23:41	126	103	DOD vascular
626	CHEST ABDOMEN PELVIS	40	White	M	9/14/03 14:51	126	85	DOD vascular
643	CHEST ABDOMEN PELVIS	32	White	M	6/19/04 18:49	123	103	DOD vascular
645	CHEST ABDOMEN PELVIS	26	White	M	12/13/07 23:40	166	116	DOD vascular
646	CHEST ABDOMEN PELVIS	39	White	M	7/8/04 22:00	78	102	DOD vascular
648	CHEST ABDOMEN PELVIS	28	White	M	6/25/04 18:10	135	109	DOD vascular
667	CHEST ABDOMEN PELVIS	40	White	M	9/1/04 20:05	142	105	DOD vascular
668	CHEST ABDOMEN PELVIS	31	Hispanic	M	10/30/04 15:42	129	91	DOD vascular
669	CHEST ABDOMEN PELVIS	47	White	M	11/18/04 0:28	150	103	DOD vascular
672	CHEST ABDOMEN PELVIS	48	White	M	8/22/02 21:41	123	126	DOD vascular
673	CHEST ABDOMEN PELVIS	35	White	M	8/24/02 7:25	82	105	DOD vascular
675	CHEST ABDOMEN PELVIS	46	White	F	11/3/02 23:20	100	94	DOD vascular
678	CHEST ABDOMEN PELVIS	47	White	M	12/8/02 21:38	143	90	DOD vascular
695	CHEST ABDOMEN PELVIS	20	White	M	11/22/04 18:45	109	127	DOD vascular
708	CHEST ABDOMEN PELVIS	43	White	M	2/8/02 8:51	135	96	DOD vascular
718	CHEST ABDOMEN PELVIS	19	White	F	3/30/02 22:35	128	126	DOD vascular
731	CHEST ABDOMEN PELVIS	19	White	M	5/27/02 9:54	122	102	DOD vascular
743	CHEST ABDOMEN PELVIS	50	White	F	6/26/02 20:59	148	81	DOD vascular
757	CHEST ABDOMEN PELVIS	39	White	F	9/28/02 21:05	103	108	DOD vascular
765	CHEST ABDOMEN PELVIS	27	Other	M	11/20/02 11:35	121	133	DOD vascular
798	CHEST ABDOMEN PELVIS	31	White	F	3/27/03 9:23	135	92	DOD vascular
847	CHEST ABDOMEN PELVIS	43	White	M	11/17/03 14:54	140	90	DOD vascular
861	CHEST ABDOMEN PELVIS	30	Asian	M	10/27/02 16:26	133	63	DOD vascular
863	CHEST ABDOMEN PELVIS	27	White	F	10/6/08 22:16	123	100	DOD vascular
864	CHEST ABDOMEN PELVIS	45	White	F	11/18/08 10:16	212	89	DOD vascular
865	CHEST ABDOMEN PELVIS	50	White	M	11/8/08 13:12	151	80	DOD vascular
884	CHEST ABDOMEN PELVIS	27	White	F	3/29/04 7:59	129	116	DOD vascular
885	CHEST ABDOMEN PELVIS	26	White	M	4/2/04 19:31	121	110	DOD vascular
886	CHEST ABDOMEN PELVIS	42	White	F	4/5/04 6:45	137	84	DOD vascular
887	CHEST ABDOMEN PELVIS	27	White	M	4/26/04 9:21	141	95	DOD vascular
893	CHEST ABDOMEN PELVIS	27	Asian	M	5/8/04 22:26	62	47	DOD vascular
902	CHEST ABDOMEN PELVIS	45	White	F	5/20/04 21:00	150	103	DOD vascular
904	CHEST ABDOMEN PELVIS	45	White	M	4/25/04 23:49	113	109	DOD vascular
905	CHEST ABDOMEN PELVIS	19	White	M	6/5/04 5:28	125	140	DOD vascular
906	CHEST ABDOMEN PELVIS	28	White	F	5/28/04 23:11	142	58	DOD vascular
907	CHEST ABDOMEN PELVIS	29	White	F	5/28/04 23:35	129	90	DOD vascular
918	CHEST ABDOMEN PELVIS	30	White	M	3/14/04 1:00	138	74	DOD vascular
979	CHEST ABDOMEN PELVIS	40	White	F	1/4/09 10:50	134	90	DOD vascular
1004	CHEST ABDOMEN PELVIS	30	White	F	6/3/04 17:40	144	105	DOD vascular
1059	CHEST ABDOMEN PELVIS	19	Black	M	1/6/09 21:35	149	90	DOD vascular
1320	CHEST ABDOMEN PELVIS	18	White	M	12/26/01 19:00	123	102	DOD vascular
1328	ABDOMEN	18	White	M	3/9/02 6:53	147	128	DOD vascular
1376	CHEST ABDOMEN PELVIS	18	White	M	6/17/03 15:28	157	113	DOD vascular
1509	CHEST ABDOMEN PELVIS	47	White	F	5/2/07 13:39	125	100	DOD vascular
1606	CHEST ABDOMEN PELVIS	27	White	F	3/5/09 1:39	131	90	DOD vascular
1608	CHEST ABDOMEN PELVIS	50	White	M	5/11/09 7:41	177	60	DOD vascular

1612	CHEST ABDOMEN PELVIS	23	White	F	6/1/09 18:35	129	91	DOD vascular
1635	CHEST ABDOMEN PELVIS	24	White	M	4/5/09 4:03	138	63	DOD vascular
1636	CHEST ABDOMEN PELVIS	26	White	F	4/6/09 9:38	119	96	DOD vascular
1736	CHEST ABDOMEN PELVIS	29	White	F	12/30/04 2:45	77	88	DOD vascular
1744	CHEST ABDOMEN PELVIS	41	White	F	4/30/07 8:44	123	78	DOD vascular
1778	CHEST ABDOMEN PELVIS	45	White	M	7/30/03 10:00	167	84	DOD vascular
1779	CHEST ABDOMEN PELVIS	26	White	F	6/3/04 1:09	106	88	DOD vascular
1780	CHEST ABDOMEN	41	White	F	10/14/03 20:41	109	87	DOD vascular
1783	CHEST ABDOMEN PELVIS	49	White	M	11/16/08 1:15	117	89	DOD vascular
1785	CHEST ABDOMEN PELVIS	21	White	M	3/21/03 18:25	119	143	DOD vascular
1787	CHEST ABDOMEN PELVIS	26	White	F	2/6/03 9:16	129	86	DOD vascular
1788	CHEST ABDOMEN PELVIS	19	White	M	11/24/04 4:37	77	156	DOD vascular
1946	CHEST ABDOMEN PELVIS	40	White	F	10/12/06 17:36	140	106	DOD vascular
2163	CT THORAX W IV CONTRAS	31	White	F	6/18/09 4:01	79	117	DOD vascular
2165	CHEST ABDOMEN PELVIS	22	White	M	7/13/09 12:35	104	132	DOD vascular
2420	CHEST ABDOMEN PELVIS	35	White	M	9/9/09 2:05	181	66	DOD vascular
3044	CHEST/ABD/PELVIS	38	White	M	7/3/00 13:18	126	78	DOD vascular
3054	CHEST ABDOMEN PELVIS	20	White	M	10/31/01 17:59	136	110	DOD vascular
3056	CHEST/ABDOMEN/PELVIS	43	White	F	8/23/01 22:23	98	112	DOD vascular
3058	CHEST ABDOMEN PELVIS	37	White	F	5/22/01 14:29	133	94	DOD vascular
3059	CHEST ABDOMEN PELVIS	42	White	F	8/28/01 19:20	116	100	DOD vascular
3067	CHEST ABDOMEN PELVIS	50	White	F	9/5/09 17:23	113	81	DOD vascular
3068	CT THORAX W IV CONTRAS	29	White	M	10/8/09 4:52	140	108	DOD vascular
3069	CT THORAX W IV CONTRAS	28	White	M	10/21/09 1:24	159	100	DOD vascular
3082	CHEST ABDOMEN PELVIS	24	White	M	6/28/09 17:09	24	90	DOD vascular
3083	CHEST ABDOMEN PELVIS	31	White	M	6/28/09 2:50	147	100	DOD vascular
3088	CHEST ABDOMEN PELVIS	22	White	M	6/27/09 20:26	144	118	DOD vascular
3089	CHEST ABDOMEN PELVIS	35	White	M	6/27/09 2:55	66	118	DOD vascular
3090	CHEST ABDOMEN PELVIS	18	White	M	6/27/09 20:47	67	106	DOD vascular
3091	CHEST ABDOMEN PELVIS	19	White	M	6/27/09 21:11	140	90	DOD vascular
3092	CHEST ABDOMEN PELVIS	19	White	F	6/27/09 20:58	105	112	DOD vascular
3094	CHEST ABDOMEN PELVIS	41	White	M	6/26/09 17:05	138	100	DOD vascular
3096	CHEST ABDOMEN PELVIS	46	White	M	6/25/09 5:19	128	113	DOD vascular
3098	CHEST ABDOMEN PLEVIS	26	Black	M	6/21/09 1:17	130	96	DOD vascular
3100	CHEST ABDOMEN PELVIS	24	Black	M	6/20/09 5:50	154	84	DOD vascular
3104	CHEST ABDOMEN PELVIS	40	White	M	6/20/09 3:36	134	107	DOD vascular
3110	CHEST ABDOMEN PELVIS	21	White	M	6/12/09 17:50	135	115	DOD vascular
3111	CHEST ABDOMEN PELVIS	28	White	M	6/12/09 20:30	125	114	DOD vascular
3115	CHEST ABDOMEN PELVIS	19	White	F	6/7/09 18:06	118	76	DOD vascular
3117	CT THORAX W IV CONTRAST	46	White	M	6/6/09 14:50	112	83	DOD vascular
3118	CT THORAX W IV CONTRAST	43	White	F	6/6/09 15:27	104	96	DOD vascular
3120	CT THORAX W IV CONTRAST	22	White	M	6/6/09 20:20	154	90	DOD vascular
3121	CT THORAX W IV CONTRAST	48	White	F	6/5/09 16:26	126	120	DOD vascular
3122	CT THORAX W IV CONTRAST	22	White	M	6/5/09 0:50	108	108	DOD vascular
3132	CT THORAX W IV CONTRAST	20	Black	M	5/29/09 12:00	146	105	DOD vascular
3137	CT THORAX W IV CONTRAST	24	White	M	5/24/09 6:04	107	121	DOD vascular

3138	CT THORAX W IV CONTRAST	42	White	M	5/24/09 20:44	123	79	DOD vascular
3140	CT THORAX W IV CONTRAST	24	White	M	5/24/09 16:39	91	75	DOD vascular
3143	CT THORAX W IV CONTRAST	31	White	M	5/21/09 22:09	139	97	DOD vascular
3145	CT THORAX W IV CONTRAST	30	White	M	5/17/09 18:59	155	103	DOD vascular
3146	CT THORAX W IV CONTRAST	47	White	M	5/17/09 16:58	167	77	DOD vascular
3150	CT THORAX W IV CONTRAST	50	White	F	12/28/09 9:01	119	79	DOD vascular
3152	CHEST ABDOMEN PELVIS	40	White	M	1/3/10 16:09	149	80	DOD vascular
3157	CHEST ABDOMEN PELVIS	49	White	M	4/11/02 9:56	194	88	DOD vascular
3158	CHEST ABDOMEN PELVIS	32	White	F	1/31/02 16:40	92	99	DOD vascular
3162	CHEST ABDOMEN PELVIS	46	Black	F	7/18/04 7:00	132	101	DOD vascular
3164	CHEST ABDOMEN PELVIS	44	White	M	5/28/05 15:32	102	147	DOD vascular
3166	CHEST ABDOMEN PELVIS	23	White	M	8/26/06 1:29	123	94	DOD vascular
3186	CT THORAX W IV CONTRAST	43	White	M	11/11/09 16:12	149	51	DOD vascular
3188	CT THORAX W IV CONTRAST	18	White	F	2/6/10 13:00	130	150	DOD vascular
3192	CHEST ABDOMEN PELVIS	48	White	M	1/19/10 8:27	123	71	DOD vascular
3193	CHEST ABDOMEN PELVIS	37	White	M	3/2/10 19:34	150	108	DOD vascular
3196	CT THORAX W IV CONTRAST	38	White	M	3/18/10 22:25	136	92	DOD vascular
3201	CHEST ABDOMEN PELVIS	48	White	M	5/12/09 17:22	148	122	DOD vascular
3202	CHEST ABDOMEN PELVIS	42	White	M	5/11/09 10:00	22	81	DOD vascular
3203	CHEST ABDOMEN PELVIS	19	White	F	5/7/09 22:24	125	79	DOD vascular
3205	CHEST ABDOMEN PELVIS	50	White	M	5/2/09 19:32	161	104	DOD vascular
3211	CHEST ABDOMEN PELVIS	18	White	F	4/24/09 12:57	110	96	DOD vascular
3215	CHEST ABDOMEN PELVIS	47	White	M	4/23/09 20:27	90	64	DOD vascular
3216	CHEST ABDOMEN PELVIS	23	White	M	5/10/09 1:45	118	78	DOD vascular
3217	CHEST ABDOMEN PELVIS	19	White	F	5/10/09 6:16	116	95	DOD vascular
3224	CT Abdomen	24	White	F	4/16/09 14:06	108	96	DOD vascular
3225	CHEST ABDOMEN PELVIS	49	White	M	4/16/09 16:35	75	121	DOD vascular
3227	CHEST ABDOMEN PELVIS	21	White	M	4/14/09 1:13	140	90	DOD vascular
3232	CHEST ABDOMEN PELVIS	45	White	F	4/8/09 22:01	137	126	DOD vascular
3233	CHEST ABDOMEN PELVIS	36	Black	M	4/4/09 19:40	109	81	DOD vascular
3237	CHEST ABDOMEN PELVIS	50	Black	F	4/4/09 19:50	204	68	DOD vascular
3238	CHEST ABDOMEN PELVIS	37	White	F	4/2/09 12:35	120	87	DOD vascular
3244	CHEST ABDOMEN PELVIS	35	White	F	3/22/09 11:09	135	100	DOD vascular
3245	CHEST ABDOMEN PELVIS	23	White	M	3/21/09 19:36	91	62	DOD vascular
3247	CHEST ABDOMEN PELVIS	36	White	F	3/23/09 0:26	110	124	DOD vascular
3251	CHEST ABDOMEN PELVIS	49	White	M	3/12/09 20:37	162	104	DOD vascular
3253	CHEST ABDOMEN PELVIS	35	Black	M	3/17/09 2:04	112	126	DOD vascular
3258	CT THORAX W IV CONTRAS	50	Black	M	3/10/09 12:06	229	83	DOD vascular
3260	CHEST ABDOMEN PELVIS	25	White	M	4/5/09 3:00	175	116	DOD vascular
3261	chest abdomen pelvis	21	Black	M	3/8/09 1:40	137	84	DOD vascular
3264	CHEST ABDOMEN PELVIS	19	White	M	3/5/09 22:02	135	87	DOD vascular
3271	CHEST ABDOMEN PELVIS	28	White	F	2/24/09 16:43	132	94	DOD vascular
3275	CHEST ABDOMEN PELVIS	47	Asian	M	2/21/09 17:12	131	110	DOD vascular
3279	CHEST ABDOMEN PELVIS	19	Other	M	2/15/09 10:16	166	124	DOD vascular
3280	CHEST ABDOMEN PELVIS	23	White	F	2/7/09 21:33	126	117	DOD vascular
3281	CHEST ABDOMEN PELVIS	47	White	M	2/7/09 19:14	152	107	DOD vascular

3282	CHEST ABDOMEN PELVIS	20	White	M	2/7/09 11:59	145	67	DOD vascular
3283	CHEST ABDOMEN PELVIS	39	White	M	2/1/09 15:40	135	105	DOD vascular
3284	CHEST ABDOMEN PELVIS	39	Black	M	2/6/09 23:26	149	100	DOD vascular
3285	CHEST ABDOMEN PELVIS	35	White	F	2/6/09 11:23	152	67	DOD vascular
3286	CHEST ABDOMEN PELVIS	21	White	F	2/1/09 17:20	147	105	DOD vascular
3287	CT THORAX W IV CONTRAS	27	White	M	1/29/09 18:00	139	77	DOD vascular
3297	CHEST ABDOMEN PELVIS	37	Black	M	1/19/09 8:12	145	62	DOD vascular
3302	CHEST ABDOMEN PELVIS	40	White	M	1/11/09 13:02	145	105	DOD vascular
3303	CHEST ABDOMEN PELVIS	31	Asian	M	1/11/09 13:42	148	70	DOD vascular
3304	CHEST ABDOMEN PELVIS	49	White	M	1/8/09 16:49	128	75	DOD vascular
3313	CHEST ABDOMEN PELVIS	48	White	M	12/15/08 10:55	123	74	DOD vascular
3314	CHEST ABDOMEN PELVIS	19	White	M	12/19/08 17:14	150	102	DOD vascular
3316	CHEST ABDOMEN PELVIS	40	White	M	12/14/08 14:26	169	69	DOD vascular
3320	CHEST ABDOMEN PELVIS	45	White	M	12/8/08 12:55	103	100	DOD vascular
3322	CHEST ABDOMEN PELVIS	29	White	M	12/7/08 8:25	147	86	DOD vascular
3323	CHEST ABDOMEN PELVIS	45	White	M	12/6/08 13:34	131	103	DOD vascular
3372	CHEST ABDOMEN PELVIS	50	White	M	1/23/04 8:26	145	93	DOD vascular
3379	CT THORAX W IV CONTRAST	36	White	F	12/6/08 2:00	128	65	DOD vascular
3391	CHEST ABDOMEN PELVIS	31	White	M	12/4/08 19:09	119	40	DOD vascular
3392	CHEST ABDOMEN PELVIS	23	White	M	12/4/08 20:22	149	99	DOD vascular
3394	CHEST ABDOMEN PELVIS	19	White	F	12/1/08 15:02	126	83	DOD vascular
3397	CHEST ABDOMEN PELVIS	19	White	M	11/28/08 4:54	184	105	DOD vascular
3402	CT THORAX W IV CONTRAS	19	White	F	11/26/08 19:01	128	103	DOD vascular
3405	CHEST ABDOMEN PELVIS	29	White	M	11/24/08 22:08	149	89	DOD vascular
3424	CHEST ABDOMEN PELVIS	44	Black	M	11/22/08 2:15	137	83	DOD vascular
3425	CHEST ABDOMEN PELVIS	43	White	F	11/22/08 5:19	141	64	DOD vascular
3426	CT THORAX W IV CONTRAST	40	Black	M	11/22/08 2:14	131	93	DOD vascular
3427	CHEST ABDOMEN PELVIS	47	White	M	11/22/08 20:05	125	90	DOD vascular
3428	CHEST ABDOMEN PELVIS	28	White	F	11/18/08 18:45	140	72	DOD vascular
3429	CHEST ABDOMEN PELVIS	48	White	M	11/18/08 4:57	157	102	DOD vascular
3431	CHEST ABDOMEN PELVIS	32	White	M	11/17/08 8:00	139	79	DOD vascular
3433	CT THORAX W IV CONTRAST	23	Black	M	11/16/08 2:11	152	64	DOD vascular
3434	CT THORAX W IV CONTRAST	22	Black	M	11/16/08 4:15	156	90	DOD vascular
3435	CT THORAX W IV CONTRAST	35	White	M	11/13/08 13:20	170	108	DOD vascular
3436	CT THORAX W IV CONTRAST	45	White	M	11/12/08 17:35	109	88	DOD vascular
3439	CHEST ABDOMEN PELVIS	49	White	F	11/10/08 8:40	127	53	DOD vascular
3446	CHEST ABDOMEN PELVIS	44	White	M	11/6/08 17:46	159	89	DOD vascular
3447	CHEST ABDOMEN PELVIS	20	White	M	11/5/08 12:26	137	102	DOD vascular
3455	CHEST ABDOMEN PELVIS	38	White	M	10/26/08 0:51	130	36	DOD vascular
3458	CHEST ABDOMEN PELVIS	49	White	F	10/19/08 21:25	115	117	DOD vascular
3459	CHEST ABDOMEN PELVIS	23	Asian	M	10/17/08 1:31	131	106	DOD vascular
3462	CHEST ABDOMEN PELVIS	20	White	M	10/14/08 17:29	159	112	DOD vascular
3463	CHEST ABDOMEN PELVIS	34	Black	M	10/14/08 3:04	75	102	DOD vascular
3505	CHEST ABDOMEN PELVIS	21	White	M	10/12/08 9:08	134	66	DOD vascular
3506	CHEST ABDOMEN PELVIS	41	White	M	10/12/08 18:48	120	112	DOD vascular
3507	CHEST ABDOMEN PELVIS	30	Black	M	10/12/08 18:48	110	97	DOD vascular

3508	CHEST ABDOMEN PELVIS	32	White	M	10/12/08 0:26	129	94	DOD vascular
3510	CT THORAX W IV CONTRAS	28	White	M	10/11/08 15:03	142	108	DOD vascular
3512	CT THORAX W IV CONTRAS	48	White	M	10/11/08 19:11	140	76	DOD vascular
3513	CT THORAX W IV CONTRAS	47	White	M	10/9/08 13:04	153	82	DOD vascular
3514	CHEST ABDOMEN PELVIS	47	White	M	10/9/08 9:41	149	62	DOD vascular
3515	CHEST ABDOMEN PELVIS	38	White	F	10/9/08 13:30	119	95	DOD vascular
3983	CHEST ABDOMEN PELVIS	29	White	F	10/9/08 13:25	118	90	DOD vascular
3985	CHEST ABDOMEN PELVIS	31	White	M	10/5/08 1:38	135	88	DOD vascular
3987	CHEST ABDOMEN PELVIS	40	White	M	10/3/08 14:23	132	77	DOD vascular
4206	CHEST ABDOMEN PELVIS	47	White	M	9/24/08 17:32	111	66	DOD vascular
4208	CHEST ABDOMEN PELVIS	19	White	M	8/25/08 23:10	165	119	DOD vascular
4346	CHEST ABDOMEN PELVIS	25	White	M	9/29/08 2:25	150	90	DOD vascular
4347	CHEST ABDOMEN PELVIS	27	White	M	9/28/08 16:53	119	82	DOD vascular
4348	CHEST ABDOMEN PELVIS	42	White	M	9/26/08 16:54	87	120	DOD vascular
4355	CHEST ABDOMEN PELVIS	48	White	M	9/27/08 2:26	148	86	DOD vascular
4356	CHEST ABDOMEN PELVIS	21	White	M	9/21/08 1:00	134	108	DOD vascular
4358	CHEST ABDOMEN PELVIS	45	White	M	9/13/08 20:50	102	86	DOD vascular
4359	CHEST ABDOMEN PELVIS	50	Black	M	9/13/08 15:48	181	104	DOD vascular
4364	CHEST ABDOMEN PELVIS	18	Black	M	9/7/08 21:13	147	120	DOD vascular
4369	CHEST ABDOMEN PELVIS	22	White	M	9/6/08 2:12	157	105	DOD vascular
4371	CHEST ABDOMEN PELVIS	33	White	M	9/2/08 16:37	135	78	DOD vascular
4372	CHEST ABDOMEN PELVIS	30	White	M	8/31/08 11:07	135	112	DOD vascular
4374	CT THORAX W IV CONTRAST	19	White	M	8/30/08 9:05	95	122	DOD vascular
4375	CT THORAX W IV CONTRAS	49	White	F	8/30/08 0:01	140	90	DOD vascular
4376	CHEST ABDOMEN PELVIS	46	White	M	8/28/08 19:09	168	86	DOD vascular
4380	CHEST ABDOMEN PELVIS	24	White	M	8/29/08 11:33	136	90	DOD vascular
4381	CT THORAX W IV CONTRAST	26	White	M	8/24/08 22:57	136	128	DOD vascular
4382	CT THORAX W IV CONTRAS	49	White	M	8/23/08 3:06	136	122	DOD vascular
4383	CHEST ABDOMEN PELVIS	48	White	F	8/23/08 11:31	148	63	DOD vascular
4384	CHEST ABDOMEN PELVIS	30	White	M	8/23/08 23:08	117	85	DOD vascular
4385	CHEST ABDOMEN PELVIS	47	White	M	8/21/08 19:10	150	92	DOD vascular
4386	CT THORAX W IV CONTRAS	19	Other	F	8/20/08 0:54	115	132	DOD vascular
6952	CHEST ABDOMEN PELVIS	30	White	M	8/16/08 12:47	154	132	DOD vascular
6957	CHEST ABDOMEN PELVIS	24	White	M	8/16/08 4:04	136	93	DOD vascular
6958	CT THORAX W IV CONTRAS	43	White	M	8/16/08 19:46	132	112	DOD vascular
6959	CHEST ABDOMEN PELVIS	46	White	M	8/15/08 13:54	164	95	DOD vascular
6966	CHEST ABDOMEN PELVIS	25	White	M	8/10/08 10:28	146	78	DOD vascular
6997	CT THORAX W IV CONTRAS	38	White	M	8/9/08 11:07	145	68	DOD vascular
7000	CHEST ABDOMEN PELVIS	37	Black	M	8/8/08 2:52	138	93	DOD vascular
7001	CHEST ABDOMEN PELVIS	27	Asian	M	8/7/08 1:48	93	98	DOD vascular
7002	CHEST ABDOMEN PELVIS	38	White	M	8/4/08 12:58	152	91	DOD vascular
7009	CT THORAX W IV CONTRAS	22	White	M	7/30/08 16:05	135	81	DOD vascular
7010	CHEST ABDOMEN PELVIS	47	Black	M	7/30/08 3:59	157	98	DOD vascular
7013	CHEST ABDOMEN PELVIS	32	White	F	7/27/08 2:37	113	74	DOD vascular
7016	CT THORAX W IV CONTRAS	21	White	M	7/26/08 10:51	133	91	DOD vascular
7020	CHEST ABDOMEN PELVIS	45	White	F	7/30/08 22:45	128	86	DOD vascular



7021	CHEST ABDOMEN PELVIS	21	White	M	7/19/08 3:11	167	110	DOD vascular
7028	CT THORAX W IV CONTRAS	34	White	M	7/13/08 13:44	97	90	DOD vascular
7029	CHEST ABDOMEN PELVIS	36	White	F	7/13/08 22:48	133	104	DOD vascular
7032	CT THORAX W IV CONTRAS	22	White	F	7/7/08 17:13	119	91	DOD vascular
7033	CHEST ABDOMEN PELVIS	43	White	M	7/5/08 15:04	94	79	DOD vascular
7034	CHEST ABDOMEN PELVIS	46	White	M	7/4/08 21:03	128	57	DOD vascular
7035	CHEST ABDOMEN PELVIS	48	White	M	7/4/08 18:06	109	134	DOD vascular
7036	CHEST ABDOMEN PELVIS	19	White	M	7/1/08 17:56	113	83	DOD vascular
7037	CHEST ABDOMEN PELVIS	50	White	M	7/1/08 10:25	129	61	DOD vascular
7038	CHEST ABDOMEN PELVIS	49	White	M	7/1/08 21:55	69	77	DOD vascular
7039	CHEST ABDOMEN PELVIS	25	White	M	7/1/08 21:05	83	50	DOD vascular
7042	CT Chest/Abd/Pel w Contrast	38	White	M	6/30/08 15:55	113	79	DOD vascular
7047	CT THORAX W IV CONTRAS	24	White	M	6/25/08 17:21	160	131	DOD vascular
7048	CHEST ABDOMEN PELVIS	43	White	M	6/25/08 14:09	127	89	DOD vascular
7050	CHEST ABDOMEN PELVIS	29	White	F	6/22/08 19:40	142	90	DOD vascular
7233	CHEST ABDOMEN PELVIS	41	Black	M	1/20/10 21:05	90	69	DOD vascular
7809	CHEST ABDOMEN PELVIS	45	White	M	6/22/08 20:42	138	73	DOD vascular
7810	CHEST ABDOMEN PELVIS	24	White	M	6/21/08 0:29	137	93	DOD vascular
7812	CHEST ABDOMEN PELVIS	22	White	M	6/22/08 19:58	73	122	DOD vascular
7813	CT THORAX W IV CONTRAS	20	White	M	6/22/08 23:31	128	135	DOD vascular
7817	CHEST ABDOMEN PELVIS	46	White	M	6/12/08 5:51	137	101	DOD vascular
7818	CHEST ABDOMEN PELVIS	20	White	M	6/19/08 14:28	133	66	DOD vascular
7822	CHEST ABDOMEN PELVIS	28	White	F	6/15/08 21:10	132	74	DOD vascular
7823	CHEST ABDOMEN PELVIS	30	Hispanic	M	6/14/08 13:58	67	78	DOD vascular
7825	CHEST ABDOMEN PELVIS	28	White	M	6/13/08 11:12	109	111	DOD vascular
7826	CHEST ABDOMEN PELVIS	25	White	M	6/11/08 7:34	177	79	DOD vascular
7827	CHEST ABDOMEN PELVIS	31	Black	M	6/11/08 18:14	99	56	DOD vascular
7828	CT THORAX W IV CONTRAS	38	White	M	6/10/08 3:40	156	87	DOD vascular
7830	CHEST ABDOMEN PELVIS	22	Black	M	4/6/08 20:20	151	73	DOD vascular
7832	CHEST ABDOMEN PELVIS	28	White	M	6/1/08 12:36	156	85	DOD vascular
7837	CHEST ABDOMEN PELVIS	37	White	M	6/9/08 16:26	140	71	DOD vascular
7840	CT THORAX W IV CONTRAS	50	Black	M	6/8/08 9:33	142	76	DOD vascular
7845	CHEST ABDOMEN PELVIS	49	Black	F	5/25/08 18:08	148	115	DOD vascular
7846	CHEST ABDOMEN PELVIS	24	White	M	5/25/08 3:53	132	87	DOD vascular
7848	CHEST ABDOMEN PELVIS	24	Black	F	5/24/08 19:19	119	83	DOD vascular
7849	CHEST ABDOMEN PELVIS	45	White	F	5/24/08 15:07	69	113	DOD vascular
7850	CHEST ABDOMEN PELVIS	32	White	F	5/23/08 1:16	129	110	DOD vascular
7857	CT THORAX W IV CONTRAS	32	White	M	5/17/08 20:00	184	144	DOD vascular
7863	CT THORAX W IV CONTRAS	37	White	F	5/13/08 13:24	124	104	DOD vascular
7864	CHEST ABDOMEN PELVIS	19	White	M	5/10/08 13:54	79	87	DOD vascular
7865	CHEST ABDOMEN PELVIS	36	White	M	5/10/08 4:49	138	98	DOD vascular
7866	CHEST ABDOMEN PELVIS	26	Black	M	5/10/08 3:50	103	72	DOD vascular
7867	CHEST ABDOMEN PELVIS	23	White	M	5/10/08 22:16	139	90	DOD vascular
7871	CHEST ABDOMEN PELVIS	23	White	F	5/5/08 5:04	52	105	DOD vascular
7872	CHEST ABDOMEN PELVIS	19	White	M	5/5/08 17:23	135	77	DOD vascular
7875	CT THORAX W IV CONTRAS	27	White	M	5/4/08 3:13	127	91	DOD vascular

7876	CHEST ABDOMEN PELVIS	48	White	M	5/4/08 17:56	67	157	DOD vascular
7879	CHEST ABDOMEN PELVIS	25	White	F	5/3/08 22:43	119	107	DOD vascular
7880	CT THORAX W IV CONTRAS	21	White	M	5/3/08 18:42	109	96	DOD vascular
7882	CHEST ABDOMEN PELVIS	25	White	M	5/2/08 20:47	110	126	DOD vascular
7884	CHEST ABDOMEN PELVIS	49	White	M	4/30/08 17:08	162	78	DOD vascular
7886	CHEST ABDOMEN PELVIS	23	Black	F	4/25/08 9:32	115	115	DOD vascular
7887	CHEST ABDOMEN PELVIS	43	White	M	4/25/08 3:18	125	83	DOD vascular
7888	CT THORAX W IV CONTRAS	50	White	M	4/24/08 23:34	157	83	DOD vascular
7889	CHEST ABDOMEN PELVIS	21	White	M	4/27/08 17:48	158	73	DOD vascular
7890	CHEST ABDOMEN PELVIS	19	White	M	4/28/08 14:10	134	83	DOD vascular
7891	CHEST ABDOMEN PELVIS	46	White	M	4/22/08 9:16	198	92	DOD vascular
7892	CT THORAX W IV CONTRAS	25	White	M	4/22/08 20:53	139	91	DOD vascular
7894	CHEST ABDOMEN PELVIS	20	White	M	4/21/08 7:45	177	99	DOD vascular
7896	CHEST ABDOMEN PELVIS	22	White	M	4/20/08 11:15	155	122	DOD vascular
7897	CHEST ABDOMEN PELVIS	26	White	F	4/19/08 11:37	146	93	DOD vascular
7900	CHEST ABDOMEN PELVIS	31	Black	M	4/14/08 20:09	183	102	DOD vascular
7902	CHEST ABDOMEN PELVIS	21	White	M	4/12/08 14:15	161	75	DOD vascular
7905	CHEST ABDOMEN PELVIS	38	Hispanic	M	4/6/08 1:03	150	71	DOD vascular
7906	CHEST ABDOMEN PELVIS	45	White	M	4/6/08 20:04	118	115	DOD vascular
7908	CHEST ABDOMEN PELVIS	49	White	M	4/7/08 11:47	97	49	DOD vascular
7911	CHEST ABDOMEN PELVIS	30	Black	M	3/30/08 14:09	185	135	DOD vascular
7914	CHEST ABDOMEN PELVIS	47	White	M	3/22/08 23:59	136	98	DOD vascular
7917	CHEST ABDOMEN PELVIS	31	White	M	3/20/08 15:50	136	85	DOD vascular
7918	CT THORAX W IV CONTRAS	20	Hispanic	M	3/16/08 16:57	138	126	DOD vascular
7919	CHEST ABDOMEN PELVIS	43	White	M	3/19/08 2:18	138	96	DOD vascular
7920	CHEST ABDOMEN PELVIS	20	White	M	3/15/08 11:55	149	100	DOD vascular
7921	CHEST ABDOMEN PELVIS	46	White	M	3/16/08 4:08	176	101	DOD vascular
7922	CHEST ABDOMEN PELVIS	38	Hispanic	M	3/14/08 10:15	127	97	DOD vascular
7923	CHEST ABDOMEN PELVIS	31	White	M	3/4/08 19:55	134	98	DOD vascular
7925	CHEST ABDOMEN PELVIS	31	White	M	3/10/08 4:36	140	88	DOD vascular
7926	CHEST ABDOMEN PELVIS	26	White	M	3/9/08 18:36	114	84	DOD vascular
7927	CHEST ABDOMEN PELVIS	19	Hispanic	M	3/16/08 16:38	144	98	DOD vascular
7928	CT THORAX W IV CONTRAS	42	White	M	2/29/08 1:43	118	101	DOD vascular
7929	CHEST ABDOMEN PELVIS	41	White	M	2/29/08 19:38	132	83	DOD vascular
7930	CT THORAX W IV CONTRAS	34	White	F	2/26/08 21:22	151	84	DOD vascular
7931	CHEST ABDOMEN PELVIS	43	Hispanic	M	2/25/08 12:37	154	78	DOD vascular
7933	CHEST ABDOMEN PELVIS	43	White	M	2/26/08 10:16	156	87	DOD vascular
7934	CHEST ABDOMEN PELVIS	19	White	M	2/22/08 5:52	168	116	DOD vascular
7938	CHEST ABDOMEN PELVIS	26	White	M	2/17/08 10:33	143	133	DOD vascular
7940	CHEST ABDOMEN PELVIS	30	White	M	2/19/08 22:45	158	119	DOD vascular
7942	CHEST ABDOMEN PELVIS	25	White	M	2/10/08 1:31	150	93	DOD vascular
7945	CT THORAX W IV CONTRAS	24	Black	F	2/12/08 14:38	93	79	DOD vascular
7949	CT THORAX W IV CONTRAS	22	Black	M	2/5/08 21:59	145	85	DOD vascular
7952	CHEST ABDOMEN PELVIS	39	White	F	2/2/08 8:37	117	117	DOD vascular
7953	CHEST ABDOMEN PELVIS	40	White	F	2/2/08 15:07	85	78	DOD vascular
7954	CHEST ABDOMEN PELVIS	45	White	M	2/1/08 20:22	152	87	DOD vascular

7955	CHEST ABDOMEN PELVIS	21	Black	M	2/1/08 12:08	134	86	DOD vascular
7959	CHEST ABDOMEN PELVIS	26	Black	F	1/27/08 5:40	133	103	DOD vascular
7960	CT THORAX W IV CONTRAS	19	White	M	3/12/08 19:24	154	80	DOD vascular
7961	CHEST ABDOMEN PELVIS	20	Other	M	1/25/08 2:51	127	103	DOD vascular
7962	CHEST ABDOMEN PELVIS	49	White	M	1/22/08 21:02	115	73	DOD vascular
7963	CHEST ABDOMEN PELVIS	45	White	M	3/13/08 16:42	68	140	DOD vascular
7965	CHEST ABDOMEN PELVIS	21	White	M	1/20/08 8:03	115	82	DOD vascular
7966	CHEST ABDOMEN PELVIS	36	White	M	1/19/08 21:35	157	121	DOD vascular
7969	CHEST ABDOMEN PELVIS	36	White	M	1/17/08 23:32	132	96	DOD vascular
7970	CT THORAX W IV CONTRAS	48	White	M	1/12/08 19:09	113	86	DOD vascular
7972	CHEST ABDOMEN PELVIS	22	White	M	1/12/08 1:05	116	100	DOD vascular
7978	CHEST ABDOMEN PELVIS	48	White	M	1/4/08 0:29	162	105	DOD vascular
7979	CHEST ABDOMEN PELVIS	30	Asian	F	1/3/08 19:57	112	105	DOD vascular
7980	CHEST ABDOMEN PELVIS	41	Black	F	1/1/08 17:00	221	72	DOD vascular
7981	CHEST ABDOMEN PELVIS	19	White	M	1/1/08 13:20	86	132	DOD vascular
7982	CHEST ABDOMEN PELVIS	19	White	M	12/31/07 4:00	116	95	DOD vascular
7984	CHEST ABDOMEN PELVIS	38	White	F	12/26/07 8:44	119	87	DOD vascular
7990	CHEST ABDOMEN PELVIS	44	White	M	12/20/07 0:22	166	100	DOD vascular
7992	CHEST ABDOMEN PELVIS	40	Black	F	12/20/07 11:55	131	67	DOD vascular
7994	CHEST ABDOMEN PELVIS	50	White	M	12/19/07 0:22	101	105	DOD vascular
7996	CHEST ABDOMEN PELVIS	25	White	M	12/15/07 2:13	121	68	DOD vascular
8863	CHEST ABDOMEN PELVIS	21	White	M	12/13/07 4:46	140	96	DOD vascular
8864	CHEST ABDOMEN PELVIS	44	White	M	12/13/07 5:23	145	88	DOD vascular
8866	CHEST ABDOMEN PELVIS	36	Hispanic	M	12/12/07 3:44	140	97	DOD vascular
8867	CHEST ABDOMEN PELVIS	36	Black	F	12/11/07 2:10	139	112	DOD vascular
8868	CHEST ABDOMEN PELVIS	38	Black	M	12/11/07 2:22	183	80	DOD vascular
8873	CHEST ABDOMEN PELVIS	23	White	F	12/7/07 17:50	118	86	DOD vascular
8875	CHEST ABDOMEN PELVIS	25	Black	M	12/6/07 13:23	150	88	DOD vascular
8876	CHEST ABDOMEN PELVIS	39	White	F	12/6/07 15:14	138	123	DOD vascular
8877	CHEST ABDOMEN PELVIS	21	White	M	12/4/07 17:19	122	94	DOD vascular
8879	CHEST ABDOMEN PELVIS	19	White	F	12/3/07 8:23	125	84	DOD vascular
8881	CHEST ABDOMEN PELVIS	45	Hispanic	M	12/1/07 8:27	139	51	DOD vascular
8884	CT THORAX W IV CONTRAS	25	White	M	11/26/07 20:19	110	67	DOD vascular
8891	CHEST ABDOMEN PELVIS	50	White	M	11/15/07 9:08	107	110	DOD vascular
8894	CHEST ABDOMEN PELVIS	18	White	M	11/11/07 17:31	159	78	DOD vascular
8895	CHEST ABDOMEN PELVIS	19	White	M	11/11/07 1:57	157	84	DOD vascular
8898	CHEST ABDOMEN PELVIS	44	White	F	11/1/07 13:34	127	85	DOD vascular
8899	CHEST ABDOMEN PELVIS	37	White	M	11/2/07 13:08	106	109	DOD vascular
8901	CHEST ABDOMEN PELVIS	46	White	M	10/27/07 3:42	111	76	DOD vascular
8902	CHEST ABDOMEN PELVIS	20	White	M	10/25/07 2:05	123	109	DOD vascular
8906	CHEST ABDOMEN PELVIS	20	White	F	10/16/07 0:09	121	115	DOD vascular
8907	CHEST ABDOMEN PELVIS	44	White	M	10/21/07 23:53	141	128	DOD vascular
8908	CHEST ABDOMEN PELVIS	48	White	M	10/21/07 20:19	100	51	DOD vascular
8909	CHEST ABDOMEN PELVIS	27	Black	M	10/17/07 14:44	118	82	DOD vascular
8912	CHEST ABDOMEN PELVIS	48	White	M	10/13/07 11:41	109	106	DOD vascular
8913	CHEST ABDOMEN PELVIS	40	White	M	10/12/07 4:47	107	77	DOD vascular

8915	CHEST ABDOMEN PELVIS	33	White	M	10/7/07 17:39	142	70	DOD vascular
8917	CHEST ABDOMEN PELVIS	40	White	M	10/10/07 17:35	118	100	DOD vascular
8918	CHEST ABDOMEN PELVIS	36	Black	M	10/9/07 6:12	142	84	DOD vascular
8920	CT THORAX W IV CONTRAS	28	White	M	10/7/07 0:42	67	119	DOD vascular
8923	CHEST ABDOMEN PELVIS	39	Other	M	9/30/07 18:00	120	71	DOD vascular
8925	CHEST ABDOMEN PELVIS	25	White	F	9/29/07 10:52	130	100	DOD vascular
8926	CT THORAX W IV CONTRAS	33	White	M	9/29/07 5:04	119	68	DOD vascular
8934	CT THORAX W IV CONTRAS	36	White	M	9/22/07 19:13	154	85	DOD vascular
8935	CHEST ABDOMEN PELVIS	36	White	M	9/22/07 23:20	157	102	DOD vascular
8936	CHEST ABDOMEN PELVIS	28	White	M	9/20/07 10:50	154	105	DOD vascular
8937	CHEST ABDOMEN PELVIS	36		F	9/21/07 8:40	149	78	DOD vascular
8942	CT THORAX W IV CONTRAS	27	White	M	9/16/07 1:10	117	86	DOD vascular
8944	CHEST ABDOMEN PELVIS	45	White	M	9/19/07 18:41	145	76	DOD vascular
8946	CHEST ABDOMEN PELVIS	25	White	M	9/17/07 18:10	155	80	DOD vascular
8949	CHEST ABDOMEN PELVIS	19	White	F	9/16/07 1:24	116	100	DOD vascular
8950	CHEST ABDOMEN PELVIS	25	White	M	9/15/07 7:45	145	126	DOD vascular
8951	CHEST ABDOMEN PELVIS	20	White	M	9/16/07 1:20	136	84	DOD vascular
8952	CHEST ABDOMEN PELVIS	42	White	M	9/13/07 0:43	167	109	DOD vascular
8953	CHEST ABDOMEN PELVIS	20	White	F	9/12/07 8:28	149	85	DOD vascular
8954	CHEST ABDOMEN PELLVIS	35	White	F	9/13/07 0:50	145	112	DOD vascular
9111	CHEST ABDOMEN PELVIS	24	White	M	9/9/07 18:53	140	87	DOD vascular
9115	CHEST ABDOMEN PELVIS	23	White	F	9/7/07 4:24	108	72	DOD vascular
9116	CHEST ABDOMEN PELVIS	28	Black	F	9/5/07 21:14	156	94	DOD vascular
9117	CHEST ABDOMEN PELVIS	33	White	M	9/5/07 1:12	135	104	DOD vascular
9118	CHEST ABDOMEN PELVIS	32	White	M	9/5/07 23:24	135	89	DOD vascular
9119	CHEST ABDOMEN PELVIS	36	Black	M	9/5/07 20:39	102	102	DOD vascular
9120	CT THORAX W IV CONTRAS	30	White	M	9/3/07 4:54	96	43	DOD vascular
9121	CHEST ABDOMEN PELVIS	34	Black	F	9/5/07 21:00	101	91	DOD vascular
9122	CHEST ABDOMEN PELVIS	45	White	M	9/3/07 17:25	105	76	DOD vascular
9124	CHEST ABDOMEN PELVIS	49	White	F	9/1/07 20:49	144	78	DOD vascular
9125	CHEST ABDOMEN PELVIS	29	Asian	M	9/1/07 16:45	120	92	DOD vascular
9127	CHEST ABDOMEN PELVIS	23	Asian	F	8/31/07 17:25	125	66	DOD vascular
9129	CHEST ABDOMEN PELVIS	24	Asian	M	8/27/07 16:45	134	86	DOD vascular
9134	CT THORAX W IV CONTRAS	37	White	F	8/25/07 14:55	114	104	DOD vascular
9136	CHEST ABDOMEN PELVIS	19	White	M	8/23/07 22:08	188	99	DOD vascular
9137	CHEST ABDOMEN PELVIS	41	White	F	8/22/07 21:23	107	97	DOD vascular
9138	CHEST ABDOMEN PELVIS	45	White	M	8/22/07 17:23	144	140	DOD vascular
9141	CHEST ABDOMEN PELVIS	26	White	M	8/18/07 5:09	138	110	DOD vascular
9143	CHEST ABDOMEN PELVIS	36	White	M	8/18/07 23:23	140	92	DOD vascular
9144	CHEST ABDOMEN PELVIS	23	White	M	8/16/07 13:38	134	101	DOD vascular
9145	CHEST ABDOMEN PELVIS	22	White	M	8/16/07 15:30	181	76	DOD vascular
9146	CHEST ABDOMEN PELVIS	37	White	M	8/16/07 2:19	145	135	DOD vascular
9147	CHEST ABDOMEN PELVIS	20	White	M	8/15/07 15:54	157	65	DOD vascular
9149	CHEST ABDOME PELVIS	25	White	M	8/13/07 13:14	121	59	DOD vascular
9151	e+1 CHEST ABDOMEN PELVIS	49	White	F	8/13/07 20:49	144	88	DOD vascular
9153	CHEST ABDOMEN PELVIS	19	White	M	8/12/07 7:20	122	103	DOD vascular

9156	CHEST ABDOMEN PELVIS	45	White	M	8/11/07 15:23	175	71	DOD vascular
9159	CHEST ABDOMEN PELVIS	49	White	M	8/8/07 21:59	191	122	DOD vascular
9160	CHEST ABDOMEN PELVIS	41	White	M	8/8/07 19:37	164	110	DOD vascular
9162	CHEST ABDOMEN PELVIS	28	White	M	8/5/07 1:17	111	78	DOD vascular
9163	CHEST ABDOMEN PELVIS	46	White	M	8/4/07 8:35	116	116	DOD vascular
9165	CT THORAX W IV CONTRAS	30	Other	M	8/3/07 0:40	159	71	DOD vascular
9166	CHEST ABDOMEN PELVIS	48	White	M	8/3/07 14:55	112	100	DOD vascular
9169	CHEST ABDOMEN PELVIS	19	White	M	7/31/07 15:38	87	94	DOD vascular
9170	CHEST ABDOMEN PELVIS	18	White	M	7/30/07 1:33	118	66	DOD vascular
9172	CHEST ABDOMEN PELVIS	29	White	M	7/28/07 8:57	145	87	DOD vascular
9173	CHEST ABDOMEN PELVIS	33	White	M	7/28/07 19:05	173	90	DOD vascular
9174	CHEST ABDOMEN PELVIS	25	White	F	7/28/07 14:17	112	85	DOD vascular
9175	CHEST ABDOMEN PELVIS	29	White	F	8/3/07 17:32	112	101	DOD vascular
9179	CHEST ABDOMEN PELVIS	49	White	M	7/26/07 23:36	162	70	DOD vascular
9180	CT THORAX W IV CONTRAS	38	White	F	7/20/07 15:39	140	130	DOD vascular
9181	CHEST ABDOMEN PELVIS	48	White	M	7/24/07 3:26	170	82	DOD vascular
9182	CHEST ABDOMEN PELVIS	36	White	M	7/24/07 15:44	139	121	DOD vascular
9184	CHEST ABDOMEN PELVIS	18	White	M	7/21/07 18:48	149	82	DOD vascular
9186	CHEST ABDOMEN PELVIS	38	White	M	7/22/07 16:15	138	85	DOD vascular
9187	CHEST ABDOMEN PELVIS	45	White	M	7/15/07 18:33	169	76	DOD vascular
9189	CT THORAX W IV CONTRAS	45	White	M	7/16/07 18:17	140	98	DOD vascular
9191	CHEST ABDOMEN PELVIS	26	White	M	7/20/07 13:43	131	82	DOD vascular
9192	CHEST ABDOMEN PELVIS	48	Black	M	7/18/07 15:53	109	87	DOD vascular
9193	CHEST ABDOMEN PELVIS	46	White	M	7/15/07 23:21	154	108	DOD vascular
9194	CHEST ABDOMEN PELVIS	35	Asian	M	7/15/07 1:18	141	88	DOD vascular
9195	CHEST ABDOMEN PELVIS	44	White	F	7/18/07 11:08	122	81	DOD vascular
9196	CT THORAX W IV CONTRAS	36	White	M	7/15/07 22:57	70	99	DOD vascular
9200	CHEST ABDOMEN PELVIS	19	White	M	7/12/07 13:04	159	74	DOD vascular
9201	CHEST ABDOMEN PELVIS	32	Black	M	7/4/07 22:01	140	130	DOD vascular
9203	CHEST ABDOMEN PELVIS	49	White	M	7/1/07 11:44	139	83	DOD vascular
9205	CHEST ABDOMEN PELVIS	32	White	F	7/9/07 0:12	121	116	DOD vascular
9208	CT THORAX W IV CONTRAS	35	White	F	7/8/07 3:27	132	124	DOD vascular
9214	CHEST ABDOMEN PELVIS	19	White	M	6/26/07 14:20	149	60	DOD vascular
9216	CHEST ABDOMEN PELVIS	32	White	M	7/4/07 20:07	132	75	DOD vascular
9217	CHEST ABDOMEN PELVIS	36	White	M	6/20/07 16:42	138	89	DOD vascular
9223	CT THORAX W IV CONTRAS	25	Black	M	6/28/07 23:09	154	78	DOD vascular
9229	CT THORAX W IV CONTRAS	19	White	F	6/23/07 14:25	111	90	DOD vascular
9230	CT THORAX W IV CONTRAS	18		M	6/23/07 20:33	157	99	DOD vascular
9232	CHEST ABDOMEN PELVIS	19	White	M	6/22/07 12:48	144	95	DOD vascular
9234	CHEST ABDOMEN PELVIS	37	White	M	6/22/07 7:21	155	61	DOD vascular
9235	CHEST ABDOMEN PELVIS	20	White	M	6/21/07 22:40	132	81	DOD vascular
9236	CHEST ABDOMEN PELVIS	29	Asian	F	6/21/07 18:44	113	81	DOD vascular
9237	CHEST ABDOMEN PELVIS	36		M	6/21/07 17:15	146	89	DOD vascular
9238	CHEST ABDOMEN PELVIS	21	White	M	6/27/07 5:27	96	90	DOD vascular
9243	CHEST ABDOMEN PELVIS	50	White	M	7/1/07 12:55	83	60	DOD vascular
9244	CHEST ABDOMEN PELVIS	44	White	M	6/19/07 2:38	153	94	DOD vascular

9245	CHEST ABDOMEN PELVIS	21	White	M	6/19/07 20:04	130	108	DOD vascular
9250	CHEST ABDOMEN PELVIS	48	White	M	6/16/07 17:07	142	76	DOD vascular
9251	CHEST ABDOMEN PELVIS	43	White	M	6/16/07 19:44	140	81	DOD vascular
9253	CHEST ABDOMEN PELVIS	27	White	M	6/15/07 15:33	119	120	DOD vascular
9254	CHEST ABDOMEN PELVIS	18	White	M	6/14/07 11:06	116	118	DOD vascular
9257	CHEST ABDOMEN PELVIS	44	White	M	6/12/07 23:31	126	117	DOD vascular
9258	CHEST ABDOMEN PELVIS	48	White	M	6/11/07 3:15	170	75	DOD vascular
9260	CT THORAX W IV CONTRAS	21	Other	F	6/7/07 9:45	127	83	DOD vascular
9261	CHEST ABDOMEN PELVIS	49	White	M	6/6/07 18:53	156	99	DOD vascular
9263	CHEST ABDOMEN PELVIS	22	White	M	6/3/07 1:14	107	80	DOD vascular
9265	CT THORAX W IV CONTRAS	39	White	F	6/3/07 17:06	118	81	DOD vascular
9267	CHEST ABDOMEN PELVIS	50	White	M	6/2/07 20:43	156	76	DOD vascular
9268	CT THORAX W IV CONTRAS	30	White	M	5/31/07 13:36	137	92	DOD vascular
9269	CHEST ABDOMEN PELVIS	43	White	M	5/31/07 20:10	138	75	DOD vascular
9272	CHEST ABDOMEN PELVIS	36	White	M	5/28/07 3:40	20	78	DOD vascular
9273	CT THORAX W IV CONTRAS	50	White	F	5/27/07 16:30	137	77	DOD vascular
9275	CHEST ABDOMEN PELVIS	35	White	M	5/27/07 22:30	130	96	DOD vascular
9279	CT THORAX W IV CONTRAS	23	White	M	5/21/07 22:33	151	91	DOD vascular
9280	CHEST ABDOMEN PELVIS	21	White	F	5/20/07 9:42	128	75	DOD vascular
9281	CHEST ABDOMEN PELVIS	19	White	M	5/20/07 16:38	135	100	DOD vascular
9282	CHEST ABDOMEN PELVIS	44	White	M	5/20/07 3:11	131	90	DOD vascular
9283	CHEST ABDOMEN PELVIS	29	White	M	5/20/07 7:50	80	48	DOD vascular
9285	CHEST ABDOMEN PELVIS	37	White	M	5/19/07 11:15	129	138	DOD vascular
9289	CHEST ABDOMEN PELVIS	30	White	F	5/15/07 0:08	122	118	DOD vascular
9290	CHEST ABDOMEN PELVIS	19	White	M	5/14/07 16:37	148	88	DOD vascular
9291	CHEST ABDOMEN PELVIS	20	White	F	5/14/07 16:54	164	124	DOD vascular
9292	CT THORAX W IV CONTRAS	40	White	F	5/14/07 23:40	127	88	DOD vascular
9293	CHEST ABDOMEN PELVIS	22	White	M	5/13/07 4:04	144	95	DOD vascular
9294	CHEST ABDOMEN PELVIS	20	Black	M	5/12/07 7:32	108	98	DOD vascular
9296	CHEST ABDOMEN PELVIS	18	White	M	5/14/07 17:30	146	126	DOD vascular
9297	CHEST ABDOMEN PELVIS	31	White	M	5/6/07 3:02	146	90	DOD vascular
9299	CHEST ABDOMEN PELVIS	42	Other	M	5/4/07 18:37	150	118	DOD vascular
9301	CHEST ABDOMEN PELVIS	26	White	M	5/3/07 2:43	163	120	DOD vascular
9307	CHEST ABDOMEN PELVIS	45	White	F	5/1/07 8:16	158	100	DOD vascular
9311	CHEST ABDOMEN PELVIS	22	Hispanic	M	4/28/07 12:06	113	99	DOD vascular
9324	CHEST ABDOMEN PELVIS	18	White	M	4/12/07 17:42	146	83	DOD vascular
9328	CT THORAX W IV CONTRAS	29	White	M	4/4/07 21:29	146	108	DOD vascular
9333	CT THORAX W IV CONTRAS	43	White	M	4/2/07 21:40	127	106	DOD vascular
9335	CHEST ABDOMEN PELVIS	46	White	M	3/30/07 20:20	135	78	DOD vascular
9337	CHEST ABDOMEN PELVIS	29	White	M	3/27/07 13:55	150	87	DOD vascular
9338	CHEST ABDOMEN PELVIS	38	White	M	3/26/07 10:47	75	140	DOD vascular
9343	CHEST ABDOMEN PELVIS	22	White	F	3/17/07 2:33	140	101	DOD vascular
9349	CHEST ABDOMEN PELVIS	43	White	M	3/12/07 22:33	95	99	DOD vascular
9355	CHEST ABDOMEN PELVIS	22	White	F	3/5/07 9:25	118	87	DOD vascular
9357	CHEST ABDOMEN PELVIS	47	White	M	3/3/07 1:17	155	80	DOD vascular
9362	CHEST ABDOMEN PELVIS	19	White	M	2/27/07 16:13	134	70	DOD vascular

9363	CT THORAX W IV CONTRAS	24	White	M	2/25/07 2:52	127	107	DOD vascular
9365	CHEST ABDOMEN PELVIS	33	White	M	2/25/07 13:13	124	107	DOD vascular
9429	CHEST ABDOMEN PELVIS	48	White	M	2/17/07 1:27	158	84	DOD vascular
9434	CT THORAX W IV CONTRAS	39	White	M	2/10/07 16:13	142	64	DOD vascular
9440	CHEST ABDOMEN PELVIS	24	Black	M	2/3/07 0:30	120	105	DOD vascular
9442	CT THORAX W IV CONTRAS	20	White	M	1/30/07 6:06	136	76	DOD vascular
9443	CT THORAX W IV CONTRAS	18	Black	F	1/27/07 15:02	153	111	DOD vascular
9445	CHEST ABDOMEN PELVIS	23	White	M	1/27/07 3:13	122	76	DOD vascular
9449	CHEST ABDOMEN PELVIS	30	White	M	1/25/07 0:25	120	112	DOD vascular
9452	CHEST ABDOMEN PELVIS	21	White	M	1/22/07 23:10	150	97	DOD vascular
9453	CHEST ABDOMEN PELVIS	22	White	M	1/22/07 23:32	157	109	DOD vascular
9454	CHEST ABDOMEN PELVIS	19	White	M	1/22/07 23:27	130	134	DOD vascular
9455	CHEST ABDOMEN PELVIS	20	White	M	1/21/07 10:24	117	85	DOD vascular
9458	CHEST ABDOMEN PELVIS	33	White	M	1/18/07 1:42	174	100	DOD vascular
9462	CHEST ABDOMEN PELVIS	32	White	M	1/12/07 15:45	119	73	DOD vascular
9463	CHEST ABDOMEN PELVIS	21	White	M	1/12/07 19:29	133	80	DOD vascular
9468	CHEST ABDOMEN PELVIS	42	White	M	1/7/07 11:14	149	104	DOD vascular
9473	CHEST ABDOMEN PELVIS	32	White	F	1/3/07 9:27	113	68	DOD vascular
9475	CHEST ABDOMEN PELVIS	22	White	F	1/1/07 3:40	94	80	DOD vascular
9484	CT THORAX W IV CONTRAS	21	White	M	12/15/06 2:02	159	104	DOD vascular
9485	CT ABDOMEN W IV CONTRA	43	Black	M	12/14/06 11:10	137	88	DOD vascular
9486	CHEST ABDOMEN PELVIS	21	White	F	12/13/06 15:35	133	163	DOD vascular
9487	CHEST ABDOMEN PELVIS	23	White	M	12/13/06 15:21	141	91	DOD vascular
9492	CHEST ABDOMEN PELVIS	45	White	M	12/8/06 9:35	100	68	DOD vascular
9496	CHEST ABDOMEN PELVIS	24	White	M	12/5/06 13:00	90	118	DOD vascular
9497	CHEST ABDOMEN PELVIS	26	White	M	12/5/06 20:25	133	85	DOD vascular
9498	CHEST ABDOMEN PELVIS	19	White	M	12/2/06 1:53	137	91	DOD vascular
9499	CHEST ABDOMEN PELVIS	19	White	M	12/1/06 0:42	172	80	DOD vascular
9509	CHEST ABDOMEN PELVIS	27	White	F	5/31/06 6:49	161	116	DOD vascular
9514	CHEST ABDOMEN PELVIS	21	White	M	5/28/06 4:44	156	99	DOD vascular
9515	CHEST ABDOMEN PELVIS	45	White	M	5/28/06 13:05	136	80	DOD vascular
9519	CT THORAX W IV CONTRAS	44	White	M	5/25/06 0:02	183	104	DOD vascular
9521	CHEST ABDOMEN PELVIS	35	White	M	5/24/06 11:12	152	84	DOD vascular
9522	CHEST ABDOMEN PELVIS	32	White	M	5/24/06 20:10	120	120	DOD vascular
9524	CHEST ABDOMEN PELVIS	18	White	F	5/23/06 20:45	160	95	DOD vascular
9525	CHEST ABDOMEN PELVIS	31	White	M	5/23/06 23:50	120	83	DOD vascular
9528	CT ABDOMEN W IV CONTRA	34	Hispanic	M	5/16/06 1:27	130	100	DOD vascular
9531	CHEST ABDOMEN PELVIS	41	White	M	5/14/06 13:33	131	108	DOD vascular
9533	CHEST ABDOMEN PELVIS	36	White	M	5/9/06 19:30	139	87	DOD vascular
9534	chest abdomen pelvis	27	White	M	5/9/06 2:32	132	74	DOD vascular
9535	CHEST ABDOMEN PELVIS	33	White	M	5/9/06 21:59	117	95	DOD vascular
9540	CHEST ABDOMEN PELVIS	49	White	F	5/7/06 14:46	143	89	DOD vascular
9541	CHEST ABDOMEN PELVIS	47	Hispanic	M	5/7/06 15:50	126	78	DOD vascular
9542	CHEST ABDOMEN PELVIS	47	White	M	5/7/06 21:15	149	98	DOD vascular
9543	CHEST ABDOMEN PELVIS	26	White	M	5/6/06 4:23	167	129	DOD vascular
9545	CHEST ABDOMEN PELVIS	28	White	M	5/5/06 23:54	138	103	DOD vascular

9551	CHEST ABDOMEN PELVIS	24	White	M	4/16/06 10:38	116	103	DOD vascular
9555	CHEST ABDOMEN PELVIS	27	White	M	4/9/06 5:50	171	122	DOD vascular
9556	CHEST ABDOMEN PELVIS	30	White	M	4/7/06 16:58	120	59	DOD vascular
9589	CHEST ABDOMEN PELVIS	35	White	F	3/5/01 18:05	118	105	DOD vascular
10543	CT THORAX W IV CONTRAST	48	White	M	7/2/09 22:39	160	88	DOD vascular
10546	CT THORAX W IV CONTRAST	47	White	F	8/12/09 17:25	141	84	DOD vascular
10550	CT THORAX W IV CONTRAST	42	Other	M	8/22/09 2:45	118	120	DOD vascular
10552	CT THORAX W IV CONTRAST	25	White	M	8/18/09 23:00	144	60	DOD vascular
10585	ABDOMEN	50	White	F	8/16/01 13:38	88	106	DOD vascular
10799	CT THORAX W IV CONTRAST	23	White	M	7/12/09 17:18	110	157	DOD vascular
10814	CT THORAX W IV CONTRAST	25	White	F	9/8/09 12:14	133	124	DOD vascular
10815	CT THORAX W IV CONTRAST	35	White	M	9/9/09 10:02	123	88	DOD vascular
10819	CT ABDOMEN W IV CONTRAST	43	White	M	9/27/09 17:51	74	99	DOD vascular
10820	CT ABDOMEN W IV CONTRAST	35	White	M	9/29/09 16:24	153	93	DOD vascular
10821	CT ABDOMEN W IV CONTRAST	49	White	M	10/5/09 17:09	117	110	DOD vascular
10824	CONTRAST	39	White	M	10/18/09 17:02	159	84	DOD vascular
10825	CT THORAX W IV CONTRAST CT ABDOMEN W IV	36	White	M	10/19/09 19:50	154	97	DOD vascular
10826	CONTRAST	20	White	M	10/20/09 20:10	102	97	DOD vascular
10827	CT THORAX W IV CONTRAST	27	White	F	10/26/09 16:45	107	82	DOD vascular
10881	CT THORAX W IV CONTRAST	44	White	M	7/21/09 1:23	162	132	DOD vascular
10883	CT THORAX W IV CONTRAST CT THORAX WO IV	40	White	M	7/21/09 0:24	144	74	DOD vascular
10885	CONTRAST	47	White	M	7/19/09 16:05	121	139	DOD vascular
10886	CT THORAX W IV CONTRAST	22	Hispanic	M	7/19/09 21:21	145	85	DOD vascular
10888	CT THORAX W IV CONTRAST	21	White	M	7/18/09 5:17	20	76	DOD vascular
10889	CT THORAX W IV CONTRAST	46	Black	M	7/24/09 17:51	165	78	DOD vascular
10891	CT THORAX W IV CONTRAST	24	Black	M	7/25/09 5:07	140	84	DOD vascular
10894	CT THORAX W IV CONTRAST	31	Other	M	12/9/09 21:47	147	80	DOD vascular
10899	CT THORAX W IV CONTRAST	28	White	M	7/14/09 18:25	144	102	DOD vascular
10926	CT THORAX W IV CONTRAST	46	White	M	7/27/09 1:10	140	119	DOD vascular
10928	CT THORAX W IV CONTRAST	31	White	M	7/28/09 11:27	197	83	DOD vascular
10930	CT THORAX W IV CONTRAST	20	White	F	7/30/09 17:57	146	120	DOD vascular
10932	CT THORAX W IV CONTRAST	30	Black	M	7/31/09 11:39	135	79	DOD vascular
10933	CT THORAX W IV CONTRAST	24	White	M	7/31/09 1:08	117	85	DOD vascular
10934	CT THORAX W IV CONTRAST	41	Hispanic	M	1/5/10 22:54	167	65	DOD vascular
10936	CT THORAX W IV CONTRAST CT ABDOMEN W IV	34	White	M	2/1/10 12:19	205	102	DOD vascular
10937	CONTRAST CT ABDOMEN W IV	45	White	M	2/1/10 15:45	138	94	DOD vascular
10938	CONTRAST CT ABDOMEN W IV	39	White	F	2/4/10 17:50	66	114	DOD vascular
10940	CONTRAST	50	White	M	2/13/10 15:15	125	58	DOD vascular
10942	CT THORAX W IV CONTRAST	30	White	M	2/20/10 9:47	153	112	DOD vascular
11124	CT THORAX W IV CONTRAST	44	White	M	3/11/10 21:32	117	90	DOD vascular
11126	CT THORAX W IV CONTRAST	44	White	M	3/28/10 7:56	127	78	DOD vascular



	CT THORAX WO IV							
11312	CONTRAST	48	White	F	1/4/10 20:29	120	95	DOD vascular
11313	CT THORAX W IV CONTRAST	23	Other	F	11/14/09 1:30	70	92	DOD vascular
11315	CT THORAX W IV CONTRAST	25	White	M	4/1/10 18:47	151	111	DOD vascular
	CT ABDOMEN W IV							
11316	CONTRAST	33	Black	F	11/24/09 10:38	100	116	DOD vascular
11317	CT THORAX W IV CONTRAST	46	White	M	11/26/09 13:48	147	59	DOD vascular
11318	CT THORAX W IV CONTRAST	24	White	M	11/26/09 13:47	135	72	DOD vascular
	CT ABDOMEN W IV							
11319	CONTRAST	21	White	M	11/27/09 17:43	146	72	DOD vascular
11320	CT THORAX W IV CONTRAST	20	White	F	10/1/09 9:49	129	87	DOD vascular
	CT ABDOMEN W IV							
11321	CONTRAST	40	White	F	10/1/09 0:02	126	110	DOD vascular
11323	CT THORAX W IV CONTRAST	32	White	M	2/26/10 8:26	147	89	DOD vascular
	CT THORAX WO IV							
11324	CONTRAST	49	White	M	7/4/10 16:23	124	86	DOD vascular
11326	CT THORAX W IV CONTRAST	24	Black	M	11/24/09 17:52	142	98	DOD vascular
11364	CT THORAX W IV CONTRAST	30	Black	M	10/12/08 18:48	110	97	DOD vascular
11365	CT THORAX W IV CONTRAST	20	White	M	4/7/10 18:01	104	80	DOD vascular
11383	CT THORAX W IV CONTRAST	29	Hispanic	M	4/12/10 8:53	119	92	DOD vascular
	CT ABDOMEN W IV							
11387	CONTRAST	22	White	M	4/17/10 13:37	164	92	DOD vascular
	CT ABDOMEN W IV							
11388	CONTRAST	35	Asian	F	4/18/10 10:48	149	72	DOD vascular
11392	CT THORAX W IV CONTRAST	24	White	F	4/23/10 3:53	96	130	DOD vascular
	CT ABDOMEN W IV							
11402	CONTRAST	50	White	M	4/23/10 20:03	160	79	DOD vascular
11440	CT THORAX W IV CONTRAST	46	White	M	5/1/10 7:25	186	81	DOD vascular
11443	CT THORAX W IV CONTRAST	28	White	F	5/2/10 11:09	136	121	DOD vascular
11463	CT THORAX W IV CONTRAST	29	White	M	5/5/10 20:04	159	125	DOD vascular
	CT ABDOMEN W IV							
11474	CONTRAST	28	White	F	5/8/10 20:27	107	123	DOD vascular
	CT ABDOMEN W IV							
11492	CONTRAST	23	White	M	6/5/10 9:58	119	121	DOD vascular
	CT ABDOMEN W IV							
11496	CONTRAST	48	White	M	5/15/10 3:58	114	112	DOD vascular
11507	CT THORAX W IV CONTRAST	37	White	M	5/18/10 10:53	106	93	DOD vascular
11569	CT THORAX W IV CONTRAST	38	White	F	5/27/10 8:34	137	80	DOD vascular
	CT ABDOMEN W IV							
11575	CONTRAST	22	White	M	5/30/10 8:44	106	104	DOD vascular
	CT ABDOMEN W IV							
11576	CONTRAST	23	White	M	6/1/10 15:59	146	88	DOD vascular
	CT ABDOMEN W IV							
11577	CONTRAST	45	White	F	6/6/10 7:57	145	80	DOD vascular
	CT ABDOMEN W IV							
11578	CONTRAST	39	White	M	6/10/10 14:17	153	107	DOD vascular
	CT ABDOMEN W IV							
11580	CONTRAST	22	White	M	6/12/10 22:22	143	80	DOD vascular
	CT ABDOMEN W IV							
11613	CONTRAST	19	White	M	11/1/09 23:01	106	61	DOD vascular
	CT ABDOMEN W IV							
11616	CONTRAST	30	Other	F	11/13/09 19:20	80	102	DOD vascular
	CT ABDOMEN W IV							
11617	CONTRAST	24	White	M	11/17/09 19:54	100	74	DOD vascular

11618	CT ABDOMEN W IV CONTRAST	45	White	F	11/18/09 21:00	131	130	DOD vascular
11619	CT ABDOMEN W IV CONTRAST	45	White	F	11/18/09 21:22	112	65	DOD vascular
11620	CT ABDOMEN W IV CONTRAST	36	Other	F	11/21/09 2:20	116	95	DOD vascular
11621	CT ABDOMEN W IV CONTRAST	24	White	M	10/4/09 4:44	122	105	DOD vascular
11624	CT ABDOMEN WO IV CONTRAST	29	White	M	10/26/09 16:42	165	83	DOD vascular
11625	CT ABDOMEN W IV CONTRAST	44	White	M	9/1/09 22:02	112	81	DOD vascular
11626	CT THORAX W IV CONTRAST	20	White	M	9/2/09 4:39	155	103	DOD vascular
11627	CT ABDOMEN W IV CONTRAST	37	White	M	9/12/09 23:52	145	68	DOD vascular
11629	CT ABDOMEN W IV CONTRAST	48	White	M	9/18/09 20:31	103	88	DOD vascular
11630	CT ABDOMEN W IV CONTRAST	20	White	M	9/27/09 2:01	108	86	DOD vascular
11631	CT ABDOMEN W IV CONTRAST	21	White	M	8/9/09 2:48	71	103	DOD vascular
11634	CT THORAX W IV CONTRAST	18	White	M	8/21/09 13:16	128	75	DOD vascular
11635	CT THORAX W IV CONTRAST	19	White	M	8/21/09 13:33	149	77	DOD vascular
12060	CHEST ABDOMEN PELVIS	21	White	M	3/23/06 3:29	112	113	DOD vascular
12061	CHEST ABDOMEN PELVIS	24	White	M	3/21/06 19:30	177	89	DOD vascular
12064	CT THORAX W IV CONTRAS	49	White	F	3/14/06 12:16	154	72	DOD vascular
12066	CHEST ABDOMEN PELVIS	45	White	M	3/12/06 19:14	84	92	DOD vascular
12067	CHEST ABDOMEN PELVIS	29	White	M	3/10/06 0:34	149	127	DOD vascular
12070	CHEST ABDOMEN PELVIS	41	White	M	3/7/06 3:22	175	100	DOD vascular
12073	CHEST ABDOMEN PELVIS	44	White	M	3/5/06 7:24	132	93	DOD vascular
12075	CHEST ABDOMEN PELVIS	49	Black	M	3/3/06 23:42	128	122	DOD vascular
12076	CHEST ABDOMEN PELVIS	38	White	M	3/3/06 22:58	128	122	DOD vascular
12077	CHEST ABDOMEN PELVIS	37	White	M	3/3/06 3:35	93	81	DOD vascular
12078	CHEST ABDOMEN PELVIS	23	White	F	2/27/06 9:50	102	88	DOD vascular
12079	CHEST ABDOMEN PELVIS	23	White	M	2/26/06 2:39	149	90	DOD vascular
12080	CHEST ABDOMEN PELVIS	46	White	M	2/26/06 18:25	129	120	DOD vascular
12082	CHEST ABDOMEN PELVIS	35	White	F	2/18/06 4:10	108	86	DOD vascular
12415	CT THORAX W IV CONTRAS	44	White	M	3/30/06 20:00	152	89	DOD vascular
12416	CT THORAX W IV CONTRAS	34	White	M	3/28/06 21:57	144	104	DOD vascular
12417	CHEST ABDOMEN PELVIS	32	White	F	2/11/06 5:45	96	113	DOD vascular
12423	CHEST ABDOMEN PELVIS	19	White	F	12/22/05 15:22	150	164	DOD vascular
12434	CHEST ABDOMEN PELVIS	23	White	M	1/1/06 12:20	149	100	DOD vascular
12435	chest abdomen pelvis	31	Other	M	1/1/06 9:20	137	108	DOD vascular
12602	CHEST ABDOMEN PELVIS	18	White	M	1/18/06 17:46	138	100	DOD vascular
12604	CHEST ABDOMEN PELVIS	40	White	F	1/16/06 10:57	112	57	DOD vascular
12606	CT THORAX W IV CONTRAS	32	White	F	1/14/06 13:50	117	106	DOD vascular
12775	CHEST ABDOMEN PELVIS	23	White	F	1/8/06 11:25	128	108	DOD vascular
12776	CHEST ABDOMEN PELVIS	32	White	M	1/8/06 11:26	137	74	DOD vascular
12777	CT THORAX W IV CONTRAS	36	White	M	1/7/06 3:10	115	90	DOD vascular
12778	CT THORAX W IV CONTRAS	35	White	F	1/7/06 7:38	100	104	DOD vascular

12782	CHEST ABDOMEN PELVIS	48	White	M	12/21/05 23:45	117	110	DOD vascular
12786	CHEST ABDOMEN PELVIS	38		M	12/13/05 16:30	106	97	DOD vascular
12792	CHEST ABDOMEN PELVIS	32	White	M	12/9/05 12:38	117	95	DOD vascular
12796	CT ABDOMEN W IV CONTRA	29	Black	M	12/3/05 7:11	189	107	DOD vascular
12799	CHEST ABDOMEN PELVIS	39	White	M	11/26/05 0:22	143	97	DOD vascular
13037	CT THORAX W IV CONTRAS	25		M	1/28/06 11:21	141	107	DOD vascular
13041	CHEST ABDOMEN PELVIS	29		M	1/25/06 19:01	126	97	DOD vascular
13043	CHEST ABDOMEN PELVIS	24	White	M	1/24/06 11:32	92	133	DOD vascular
13045	CHEST ABDOMEN PELVIS	22	White	M	1/22/06 7:38	128	97	DOD vascular
13048	CT THORAX W IV CONTRAST	42	White	M	11/30/10 23:31	172	108	DOD vascular
13656	CT THORAX W IV CONTRAST	24	White	M	9/25/10 5:57	119	112	DOD vascular
14339	CT OUTSIDE FILM CONSULT ABDOMEN	24	White	M	10/27/10 12:51	90	110	DOD vascular
14340	CT THORAX W IV CONTRAST	21	White	M	12/6/10 19:49	78	157	DOD vascular
14515	CT THORAX W IV CONTRAST	47	Black	M	6/12/07 0:46	197	82	DOD vascular
14516	CT THORAX W IV CONTRAST	48	Black	M	6/3/07 23:17	109	78	DOD vascular
15304	CT OUTSIDE FILM CONSULT ABDOMEN	41	White	F	6/26/09 17:13	100	169	DOD vascular
15496	CHEST	32	White	M	6/16/06 22:06	131	134	DOD vascular
15964	CHEST ABDOMEN PELVIS	18	White	F	11/6/03 21:18	140	128	DOD vascular
16017	CT THORAX W IV CONTRAST	27	White	M	6/29/09 23:30	147	67	DOD vascular
16020	CT ABDOMEN W IV CONTRAST	36	White	M	8/5/09 18:56	133	126	DOD vascular
16022	CT THORAX W IV CONTRAST	40	White	M	8/8/09 9:13	141	81	DOD vascular
16024	CT ABDOMEN W IV CONTRAST	46	White	M	8/9/09 19:58	153	75	DOD vascular
16026	CT ABDOMEN W IV CONTRAST	30	White	F	8/16/09 8:52	128	89	DOD vascular
16027	CT ABDOMEN W IV CONTRAST	24	White	M	8/18/09 3:01	155	68	DOD vascular
16028	CT ABDOMEN W IV CONTRAST	47	White	M	8/22/09 11:37	118	51	DOD vascular
16029	CT ABDOMEN W IV CONTRAST	49	White	F	6/20/10 14:54	138	73	DOD vascular
16031	CT ABDOMEN W IV CONTRAST	40	White	M	6/17/10 11:09	119	80	DOD vascular
16032	CT ABDOMEN W IV CONTRAST	47	Hispanic	F	6/3/10 8:14	114	115	DOD vascular
16033	CT ABDOMEN W IV CONTRAST	36	Other	M	5/19/10 13:00	136	106	DOD vascular
16034	CT ABDOMEN W IV CONTRAST	19	White	M	6/2/10 15:51	160	55	DOD vascular
16035	CT ABDOMEN W IV CONTRAST	27	White	F	5/8/10 12:22	165	79	DOD vascular
16036	CT ABDOMEN W IV CONTRAST	50	White	F	5/5/10 8:21	193	125	DOD vascular
16038	CT ABDOMEN W IV CONTRAST	19	White	F	4/29/10 17:05	141	84	DOD vascular
16043	CT ABDOMEN W IV CONTRAST	43	White	M	4/20/10 20:04	139	101	DOD vascular
16046	CT ABDOMEN W IV CONTRAST	29	Black	M	4/15/10 20:10	150	79	DOD vascular
16049	CT ABDOMEN W IV	43	Black	F	4/12/10 10:00	148	97	DOD vascular

	CONTRAST							
	CT ABDOMEN W IV							
16053	CONTRAST	26	White	M	3/25/10 9:00	143	110	DOD vascular
	CT ABDOMEN W IV							
16057	CONTRAST	27	White	M	5/24/10 15:50	83	109	DOD vascular
	CT ABDOMEN W IV							
16058	CONTRAST	24	White	M	5/24/10 11:57	135	75	DOD vascular
	CT ABDOMEN W IV							
16060	CONTRAST	32	White	F	5/15/10 14:19	137	88	DOD vascular
	CT ABDOMEN W IV							
16061	CONTRAST	24	White	M	5/14/10 19:45	129	40	DOD vascular
	CT ABDOMEN W IV							
16068	CONTRAST	40	White	F	2/28/10 3:20	131	78	DOD vascular
	CT ABDOMEN W IV							
16069	CONTRAST	20	Hispanic	M	2/20/10 11:50	134	78	DOD vascular
	CT ABDOMEN W IV							
16070	CONTRAST	29	White	M	8/15/09 2:32	144	89	DOD vascular
	CT ABDOMEN W IV							
16071	CONTRAST	50	White	M	2/24/10 21:20	180	94	DOD vascular
	CT ABDOMEN W IV							
16131	CONTRAST	18	White	M	2/10/10 23:11	125	85	DOD vascular
	CT ABDOMEN W IV							
16134	CONTRAST	38	White	M	1/31/10 14:57	162	88	DOD vascular
	CT ABDOMEN W IV							
16136	CONTRAST	50	White	F	1/27/10 12:56	138	101	DOD vascular
	CT ABDOMEN W IV							
16137	CONTRAST	20	White	M	1/24/10 2:23	185	104	DOD vascular
16138	CT THORAX W IV CONTRAST	28	White	M	12/30/09 3:46	145	111	DOD vascular
	CT ABDOMEN W IV							
16139	CONTRAST	49	White	F	1/20/10 9:01	146	84	DOD vascular
	CT ABDOMEN W IV							
16153	CONTRAST	23	White	M	12/31/09 17:41	163	93	DOD vascular
	CT ABDOMEN W IV							
16156	CONTRAST	33	White	F	12/27/09 11:51	151	109	DOD vascular
	CT ABDOMEN W IV							
16162	CONTRAST	18	White	F	12/26/09 7:00	134	97	DOD vascular
	CT ABDOMEN W IV							
16169	CONTRAST	39	Black	M	11/24/09 10:37	154	108	DOD vascular
	CT ABDOMEN W IV							
16170	CONTRAST	42	Black	M	11/22/09 7:42	119	68	DOD vascular
	CT ABDOMEN W IV							
16173	CONTRAST	19	Black	F	11/20/09 23:50	145	88	DOD vascular
	CT ABDOMEN W IV							
16174	CONTRAST	19	White	M	11/18/09 9:57	142	85	DOD vascular
16340	CHEST ABDOMEN PELVIS	36	White	M	7/31/04 4:10	102	88	DOD vascular
16341	CHEST ABDOMEN PELVIS	36	White	F	10/17/02 16:02	121	80	DOD vascular
	CT OUTSIDE FILM CONSULT							
16859	CHEST	43	White	M	9/21/07 8:35	143	129	DOD vascular
16867	CT THORAX W IV CONTRAST	32	White	F	7/3/07 7:19	93	113	DOD vascular
16878	CT THORAX W IV CONTRAST	23	White	M	8/26/06 7:27	148	81	DOD vascular
16879	CT THORAX W IV CONTRAST	44	Black	M	10/29/06 0:03	130	98	DOD vascular
16882	CT THORAX W IV CONTRAST	50	White	F	8/9/06 22:56	105	95	DOD vascular
16922	CT THORAX W IV CONTRAST	36	White	M	6/25/06 0:38	163	106	DOD vascular
16923	CT THORAX W IV CONTRAST	42	White	F	5/7/06 1:38	119	98	DOD vascular
16927	CT THORAX W IV CONTRAST	31	White	F	4/9/11 17:03	126	89	DOD vascular

16928	CT ABDOMEN PELVIS W IV CONTRAST	46	White	M	4/2/11 18:58	199	86	DOD vascular
16929	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	25	Black	M	2/7/11 2:22	115	87	DOD vascular
16930	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	31	White	M	2/5/11 13:35	127	84	DOD vascular
16931	CT THORAX W IV CONTRAST	48	White	M	1/29/11 11:41	149	68	DOD vascular
16933	CT THORAX W IV CONTRAST	29	White	F	1/1/11 21:00	132	56	DOD vascular
16935	CT THORAX W IV CONTRAST CT ABDOMEN W IV CONTRAST	25	White	F	9/18/10 12:00	113	87	DOD vascular
16943	CT ABDOMEN W IV CONTRAST	18	White	M	10/10/10 16:19	110	65	DOD vascular
16946	CT THORAX W IV CONTRAST	24	White	M	9/27/10 0:55	169	83	DOD vascular
16947	CT THORAX W IV CONTRAST	46	White	M	9/7/10 20:20	129	88	DOD vascular
16950	CT THORAX W IV CONTRAST	44	White	M	8/14/10 2:39	104	118	DOD vascular
17034	CT THORAX W IV CONTRAST CT ABDOMEN W IV CONTRAST	22	White	M	3/24/07 5:45	150	89	DOD vascular
17037	CT THORAX W IV CONTRAST CT ABDOMEN W IV CONTRAST	18	Black	M	4/21/10 22:44	133	154	DOD vascular
17054	CT THORAX W IV CONTRAST CT ABDOMEN W IV CONTRAST	37	White	F	6/20/06 22:34	119	79	DOD vascular
17067	CT ABDOMEN W IV CONTRAST	46	Hispanic	F	7/14/10 12:29	132	85	DOD vascular
17077	CT THORAX W IV CONTRAST	48	White	M	2/28/10 7:27	130	80	DOD vascular
17438	CT THORAX W IV CONTRAST	26	White	M	7/21/10 6:43	131	91	DOD vascular
17445	CT THORAX W IV CONTRAST	40	Hispanic	M	8/31/10 13:13	136	76	DOD vascular
17462	CT THORAX W IV CONTRAST	47	White	M	10/29/06 18:53	131	77	DOD vascular
17497	CT THORAX W IV CONTRAST	21	White	M	6/5/10 3:08	140	101	DOD vascular
17498	CT THORAX W IV CONTRAST	40	Asian	F	9/1/06 19:37	107	92	DOD vascular
17499	CT THORAX W IV CONTRAST CT ABDOMEN W IV CONTRAST	36	Black	M	8/17/06 23:37	111	96	DOD vascular
17515	CT THORAX W IV CONTRAST	48	White	M	11/8/05 18:06	141	86	DOD vascular
17568	CT THORAX W IV CONTRAST	46	White	F	12/3/04 14:31	101	102	DOD vascular
17569	CT THORAX W IV CONTRAST CT ABDOMEN W IV CONTRAST	40	White	M	6/19/05 3:05	138	105	DOD vascular
17573	CT ABDOMEN W IV CONTRAST	39	White	F	1/27/05 14:53	115	79	DOD vascular
17631	CT THORAX W IV CONTRAST	33	White	F	5/27/05 18:30	108	76	DOD vascular
19466	CT THORAX W IV CONTRAST	19	White	F	11/16/07 16:17	72	102	DOD vascular
19479	CT THORAX W IV CONTRAST	46	White	M	8/26/06 22:10	88	76	DOD vascular
19854	CT THORAX W IV CONTRAST	30	White	M	9/18/10 12:10	164	114	DOD vascular
19914	CT THORAX W IV CONTRAST CT ANGIO PELVIS WO AND W CONTRAST	19	White	M	8/17/08 3:52	111	107	DOD vascular
19954	CT THORAX W IV CONTRAST	25	White	F	2/22/11 20:43	104	107	DOD vascular
19972	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	30	Black	F	8/21/11 16:02	115	63	DOD vascular
19974	CT OUTSIDE FILM CONSULT CHEST	33	White	M	8/9/11 17:29	125	76	DOD vascular
20155	CT THORAX W IV CONTRAST	25	White	F	2/22/11 20:43	104	107	DOD vascular
20454	CT THORAX W IV CONTRAST	49	American Indian	F	5/1/11 18:22	120	73	DOD vascular
20455	CT THORAX W IV CONTRAST	33	White	M	5/22/11 4:52	122	98	DOD vascular
20937	CT THORAX W IV CONTRAST	21	White	M	4/24/11 8:15	123	125	DOD vascular

21328	CT THORAX W IV CONTRAST	31	White	M	7/30/10 21:19	134	77	DOD vascular
21329	CT THORAX W IV CONTRAST	48	White	F	7/28/10 9:47	142	68	DOD vascular
21331	CT THORAX W IV CONTRAST	34	White	M	7/25/10 21:58	126	81	DOD vascular
21332	CT THORAX W IV CONTRAST	19	White	F	7/23/10 20:03	132	96	DOD vascular
21333	CT THORAX W IV CONTRAST	40	White	F	7/22/10 10:04	125	83	DOD vascular
21334	CT THORAX W IV CONTRAST	41	White	M	7/22/10 20:19	139	60	DOD vascular
21335	CT THORAX W IV CONTRAST	48	Other	M	7/22/10 9:19	117	105	DOD vascular
21336	CT THORAX W IV CONTRAST	43	White	M	7/22/10 2:48	123	86	DOD vascular
21338	CT THORAX W IV CONTRAST	32	White	M	7/7/10 10:34	142	117	DOD vascular
21339	CT THORAX W IV CONTRAST	36	Other	M	7/5/10 2:02	93	83	DOD vascular
21340	CT THORAX W IV CONTRAST	43	White	F	7/4/10 22:44	141	91	DOD vascular
21341	CT THORAX W IV CONTRAST	37	White	F	7/4/10 17:30	137	80	DOD vascular
21344	CT THORAX W IV CONTRAST	23	White	M	7/2/10 17:14	140	75	DOD vascular
21346	CT THORAX W IV CONTRAST	20	White	F	7/24/11 17:53	161	110	DOD vascular
21502	CT THORAX W IV CONTRAST	42	White	F	4/5/04 6:45	137	84	DOD vascular
21773	CT THORAX W IV CONTRAST	36	White	F	8/14/10 1:48	97	74	DOD vascular
21807	CT THORAX W IV CONTRAST	31	White	F	8/15/10 20:47	114	86	DOD vascular
21842	CT THORAX W IV CONTRAST CT ABDOMEN W IV	18	White	F	4/10/04 0:00	140	80	DOD vascular
21888	CONTRAST CT ABDOMEN W IV	28	White	M	8/23/09 0:09	161	158	DOD vascular
21892	CONTRAST CT ABDOMEN W IV	50	White	F	8/26/09 18:43	119	75	DOD vascular
21894	CONTRAST CT ABDOMEN W IV	40	White	M	9/6/09 20:55	161	113	DOD vascular
21896	CONTRAST CT ABDOMEN W IV	22	White	M	9/19/09 3:04	144	75	DOD vascular
21897	CONTRAST CT ABDOMEN W IV	39	White	F	9/23/09 18:31	108	91	DOD vascular
21898	CONTRAST CT ABDOMEN W IV	29	White	M	9/24/09 4:15	122	101	DOD vascular
21902	CONTRAST CT ABDOMEN W IV	25	Asian	M	10/10/09 2:00	139	114	DOD vascular
21903	CONTRAST CT ABDOMEN W IV	45	White	F	10/14/09 10:22	133	82	DOD vascular
21905	CONTRAST CT ABDOMEN W IV	32	Black	M	10/23/09 5:58	162	98	DOD vascular
21906	CONTRAST CT ABDOMEN W IV	30	White	F	10/25/09 2:18	129	88	DOD vascular
21908	CONTRAST CT ABDOMEN W IV	41	White	M	10/27/09 14:07	133	76	DOD vascular
21911	CONTRAST CT ABDOMEN PELVIS W IV	33	White	M	11/9/09 3:28	138	98	DOD vascular
21943	CONTRAST	49	White	F	9/11/11 20:34	155	75	DOD vascular
21946	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	20	White	M	9/25/11 2:08	78	115	DOD vascular
21953	CONTRAST	20	White	M	9/25/11 2:08	78	115	DOD vascular
21955	CT THORAX W IV CONTRAST	39	White	M	8/17/10 8:57	108	89	DOD vascular
21969	CT THORAX W IV CONTRAST CT ABDOMEN W IV	48	White	F	8/21/10 3:24	174	121	DOD vascular
22060	CONTRAST	19	Black	F	7/3/05 16:37	135	149	DOD vascular
22712	CT THORAX W IV CONTRAST	19	White	M	7/24/10 16:58	138	90	DOD vascular

22716	CT THORAX W IV CONTRAST	49	White	F	7/14/10 6:39	113	96	DOD vascular
22735	CT THORAX W IV CONTRAST	35	White	F	8/6/10 19:48	127	81	DOD vascular
22752	CT THORAX W IV CONTRAST	19	White	F	6/6/04 23:48	98	110	DOD vascular
22753	CT THORAX W IV CONTRAST	50	White	M	8/9/10 21:00	141	126	DOD vascular
22754	CT THORAX W IV CONTRAST	22	White	M	7/18/10 12:26	145	110	DOD vascular
22756	CT THORAX W IV CONTRAST	40	White	M	8/17/10 19:31	129	72	DOD vascular
23081	CT THORAX W IV CONTRAST	20	White	F	9/26/11 19:50	137	96	DOD vascular
23085	CT THORAX W IV CONTRAST	30	White	M	7/28/05 19:50	127	98	DOD vascular
23146	CT THORAX W IV CONTRAST	44	White	F	1/22/12 8:53	113	76	DOD vascular
23561	CT THORAX W IV CONTRAST	36	White	F	12/12/09 12:07	85	111	DOD vascular
23566	CT THORAX WO IV CONTRAST	21	White	M	7/14/09 8:24	171	97	DOD vascular
23575	CT THORAX W IV CONTRAST	42	White	F	6/22/09 19:30	142	68	DOD vascular
23589	CT THORAX W IV CONTRAST	26	White	F	6/6/10 1:48	129	114	DOD vascular
23590	CT THORAX W IV CONTRAST	34	White	M	3/3/10 18:32	131	98	DOD vascular
23596	CT THORAX W IV CONTRAST	35	White	F	11/19/09 14:51	113	98	DOD vascular
23597	CT THORAX W IV CONTRAST	19	White	M	1/24/10 3:27	59	74	DOD vascular
23598	CT THORAX W IV CONTRAST	22	White	M	6/26/10 20:25	152	83	DOD vascular
23602	CT ABDOMEN PELVIS W IV CONTRAST	21	White	M	4/23/11 1:28	134	98	DOD vascular
23603	CT ABDOMEN PELVIS W IV CONTRAST	43	White	F	4/23/11 21:26	145	93	DOD vascular
23604	CT ABDOMEN PELVIS W IV CONTRAST	22	White	M	4/22/11 2:53	158	115	DOD vascular
23607	CT ABDOMEN PELVIS W IV CONTRAST	28	Black	M	4/12/11 15:49	150	63	DOD vascular
23608	CT ABDOMEN PELVIS W IV CONTRAST	37	White	M	4/9/11 2:20	132	89	DOD vascular
23617	CT ABDOMEN W IV CONTRAST	24	White	M	6/13/10 1:21	112	86	DOD vascular
23663	CT ABDOMEN PELVIS W IV CONTRAST	19	Black	M	9/30/11 2:45	153	115	DOD vascular
23664	CT ABDOMEN PELVIS W IV CONTRAST	45	White	F	9/28/11 12:07	175	160	DOD vascular
23667	CT ABDOMEN PELVIS W IV CONTRAST	40	White	M	9/25/11 0:51	144	85	DOD vascular
23668	CT ABDOMEN PELVIS W IV CONTRAST	23	White	F	9/24/11 14:34	120	61	DOD vascular
23684	CT THORAX W IV CONTRAST	42	White	F	9/24/11 17:32	127	83	DOD vascular
23692	CT THORAX W IV CONTRAST	21	White	M	9/13/11 0:53	149	84	DOD vascular
23693	CT THORAX W IV CONTRAST	46	White	M	9/11/11 20:32	182	84	DOD vascular
23696	CT THORAX W IV CONTRAST	26	White	M	9/8/11 16:47	153	58	DOD vascular
23697	CT THORAX W IV CONTRAST	25	White	F	9/6/11 17:10	99	86	DOD vascular
23698	CT THORAX W IV CONTRAST	19	White	F	9/10/11 20:10	149	150	DOD vascular
23700	CT THORAX W IV CONTRAST	29	White	M	9/4/11 22:54	144	68	DOD vascular
23702	CT THORAX W IV CONTRAST	27	White	M	9/4/11 20:40	144	56	DOD vascular
23703	CT THORAX W IV CONTRAST	37	White	M	9/3/11 19:16	139	84	DOD vascular
23706	CT ABDOMEN PELVIS W IV CONTRAST	39	White	F	9/1/11 18:23	159	110	DOD vascular
23711	CT THORAX W IV CONTRAST	22	White	M	8/23/11 14:27	148	91	DOD vascular
23712	CT THORAX W IV CONTRAST	29	Black	M	8/21/11 16:00	85	82	DOD vascular

23713	CT THORAX W IV CONTRAST	40	White	M	8/21/11 11:15	159	94	DOD vascular
23715	CT THORAX W IV CONTRAST	18	White	M	8/18/11 3:49	137	106	DOD vascular
23717	CT THORAX W IV CONTRAST	41	White	M	8/17/11 9:50	120	58	DOD vascular
23718	CT THORAX W IV CONTRAST	39	White	M	8/16/11 7:57	139	72	DOD vascular
23722	CT THORAX W IV CONTRAST	25	White	M	8/5/11 6:21	137	156	DOD vascular
23724	CT THORAX W IV CONTRAST	19	Black	M	8/3/11 10:49	203	88	DOD vascular
23729	CT THORAX W IV CONTRAST	35	White	M	7/27/11 17:44	140	76	DOD vascular
23730	CT THORAX W IV CONTRAST	48	White	M	7/26/11 15:36	143	103	DOD vascular
23733	CT THORAX W IV CONTRAST	27	White	M	7/26/11 14:20	119	100	DOD vascular
23735	CT THORAX W IV CONTRAST	32	White	M	7/22/11 3:52	117	107	DOD vascular
23736	CT THORAX W IV CONTRAST	34	White	M	7/20/11 20:45	125	92	DOD vascular
23738	CT THORAX W IV CONTRAST	21	White	F	7/18/11 16:04	131	98	DOD vascular
23739	CT THORAX W IV CONTRAST	22	White	M	7/17/11 3:05	184	58	DOD vascular
23788	CT ABDOMEN W IV CONTRAST	41	White	M	9/29/09 15:49	132	86	DOD vascular
23789	CT ABDOMEN W IV CONTRAST	42	White	M	1/27/10 11:10	186	106	DOD vascular
23796	CT ABDOMEN W IV CONTRAST	46	Other	F	11/8/09 20:34	151	101	DOD vascular
23801	CT ABDOMEN W IV CONTRAST	23	White	M	6/6/10 5:45	141	87	DOD vascular
23805	CT ABDOMEN W IV CONTRAST	19	White	F	3/24/10 7:07	105	81	DOD vascular
23830	CT ABDOMEN W IV CONTRAST	42	White	M	11/11/09 17:15	138	112	DOD vascular
23859	CT THORAX W IV CONTRAST	34	Black	F	5/28/11 1:37	151	104	DOD vascular
23860	CT ABDOMEN PELVIS W IV CONTRAST	45	White	F	5/11/11 18:44	131	110	DOD vascular
23861	CT THORAX W IV CONTRAST	23	White	M	6/19/11 4:54	141	88	DOD vascular
23865	CT THORAX W IV CONTRAST	30	White	M	7/16/11 20:17	135	57	DOD vascular
23866	CT THORAX W IV CONTRAST	26	White	M	7/16/11 15:08	119	71	DOD vascular
23867	CT THORAX W IV CONTRAST	40	White	M	7/16/11 10:31	119	114	DOD vascular
23868	CT THORAX W IV CONTRAST	42	White	M	7/16/11 14:33	130	64	DOD vascular
23876	CT THORAX W IV CONTRAST	48	White	M	5/8/11 21:58	122	100	DOD vascular
23877	CT THORAX W IV CONTRAST	49	White	F	5/7/11 10:49	168	81	DOD vascular
23878	CT THORAX W IV CONTRAST	41	White	M	7/12/11 3:39	121	111	DOD vascular
23879	CT THORAX W IV CONTRAST	49	White	F	7/4/11 1:06	103	84	DOD vascular
23880	CT THORAX W IV CONTRAST	48	White	F	7/3/11 20:16	158	80	DOD vascular
23881	CT THORAX W IV CONTRAST	49	White	M	7/2/11 5:32	123	95	DOD vascular
23882	CT THORAX W IV CONTRAST	19	Black	M	7/2/11 3:52	166	85	DOD vascular
23883	CT THORAX W IV CONTRAST	47	White	M	7/2/11 6:56	141	96	DOD vascular
23884	CT THORAX W IV CONTRAST	30	White	M	6/30/11 13:21	141	58	DOD vascular
23885	CT THORAX W IV CONTRAST	22	White	M	6/28/11 8:15	146	97	DOD vascular
23898	CT ABDOMEN PELVIS W IV CONTRAST	21	Other	M	6/26/11 19:25	129	88	DOD vascular
23899	CT ABDOMEN PELVIS W IV CONTRAST	19	Other	F	6/25/11 15:11	107	70	DOD vascular
23900	CT THORAX W IV CONTRAST	20	White	M	6/19/11 11:14	152	94	DOD vascular
23901	CT ABDOMEN PELVIS W IV CONTRAST	38	White	M	6/16/11 21:40	145	61	DOD vascular



23902	CT THORAX W IV CONTRAST	44	White	M	6/14/11 19:13	71	74	DOD vascular
23919	CT ABDOMEN PELVIS W IV CONTRAST	47	White	F	6/10/11 11:46	77	95	DOD vascular
23920	CT ABDOMEN PELVIS W IV CONTRAST	42	White	M	6/9/11 10:21	146	73	DOD vascular
23921	CT ABDOMEN PELVIS W IV CONTRAST	48	White	M	6/8/11 1:49	113	108	DOD vascular
23922	CT ABDOMEN PELVIS W IV CONTRAST	27	Asian	M	6/8/11 10:50	119	62	DOD vascular
23923	CT ABDOMEN PELVIS W IV CONTRAST	27	Asian	M	6/8/11 10:32	123	105	DOD vascular
23924	CT ABDOMEN PELVIS W IV CONTRAST	18	White	F	6/7/11 14:04	141	66	DOD vascular
23925	CT ABDOMEN PELVIS W IV CONTRAST	47	White	M	6/5/11 22:57	180	81	DOD vascular
23926	CT ABDOMEN PELVIS W IV CONTRAST	46	White	F	6/5/11 4:25	147	133	DOD vascular
23928	CT ABDOMEN PELVIS W IV CONTRAST	18	White	M	6/2/11 22:13	140	87	DOD vascular
23929	CT ABDOMEN PELVIS W IV CONTRAST	20	White	M	5/28/11 0:01	140	112	DOD vascular
23930	CT ABDOMEN PELVIS W IV CONTRAST	22	White	M	5/26/11 13:28	160	90	DOD vascular
23931	CT ABDOMEN PELVIS W IV CONTRAST	20	White	M	5/25/11 11:49	116	86	DOD vascular
23932	CT ABDOMEN PELVIS W IV CONTRAST	19	White	M	5/20/11 19:48	103	95	DOD vascular
23933	CT ABDOMEN PELVIS W IV CONTRAST	43	White	M	5/13/11 9:05	150	76	DOD vascular
23934	CT ABDOMEN PELVIS W IV CONTRAST	22	White	M	5/8/11 19:51	134	78	DOD vascular
24277	CT THORAX W IV CONTRAST	49	White	M	9/6/04 22:25	99	66	DOD vascular
24278	CT THORAX W IV CONTRAST	48		M	8/13/04 22:20	197	117	DOD vascular
24279	CT ABDOMEN W IV CONTRAST	44	White	F	9/12/04 0:50	151	89	DOD vascular
24288	CT THORAX W IV CONTRAST	25	White	F	8/15/04 20:45	109	104	DOD vascular
24293	CT THORAX W IV CONTRAST	40	Black	M	10/16/04 8:07	162	87	DOD vascular
24298	CT THORAX W IV CONTRAST	26	White	M	8/7/04 13:57	137	92	DOD vascular
24300	CT THORAX W IV CONTRAST	46	White	M	8/20/04 13:54	146	76	DOD vascular
24315	CT ABDOMEN W IV CONTRAST	47		M	10/11/04 10:22	122	46	DOD vascular
24316	CT THORAX W IV CONTRAST	24	Black	M	10/9/04 2:22	152	89	DOD vascular
24317	CT THORAX W IV CONTRAST	40	White	M	9/6/04 3:30	121	111	DOD vascular
24320	CT THORAX W IV CONTRAST	19	Black	F	12/18/04 19:17	126	106	DOD vascular
24325	CT THORAX W IV CONTRAST	35	White	M	3/16/05 21:54	146	85	DOD vascular
24327	CT THORAX W IV CONTRAST	46	White	M	4/17/05 12:57	131	60	DOD vascular
24329	CT THORAX W IV CONTRAST	24	Other	M	2/18/05 23:48	178	65	DOD vascular
24331	CT THORAX W IV CONTRAST	19	White	M	10/20/04 19:18	137	108	DOD vascular
24335	CT THORAX W IV CONTRAST	35	White	M	2/17/05 22:54	154	136	DOD vascular
24339	CT THORAX W IV CONTRAST	37		F	1/11/05 9:26	132	88	DOD vascular
24341	CT THORAX W IV CONTRAST	30	Black	M	1/29/05 20:55	146	90	DOD vascular
24342	CT ABDOMEN W IV CONTRAST	29	White	M	3/4/05 4:27	123	77	DOD vascular
24343	CT ABDOMEN W IV	36	White	M	4/19/05 18:34	145	96	DOD vascular

CONTRAST								
24344	CT THORAX W IV CONTRAST	18	White	M	3/12/05 20:02	148	105	DOD vascular
24346	CT THORAX W IV CONTRAST	37	White	M	11/6/04 13:28	132	80	DOD vascular
24354	CT THORAX W IV CONTRAST	23	White	F	1/29/05 20:40	144	117	DOD vascular
24355	CT THORAX W IV CONTRAST	22	White	M	12/26/04 20:51	155	126	DOD vascular
24364	CT THORAX W IV CONTRAST	40	White	M	2/3/05 2:50	93	74	DOD vascular
24366	CT THORAX W IV CONTRAST	19	White	M	4/11/05 3:27	144	96	DOD vascular
24370	CT THORAX W IV CONTRAST	43	White	F	10/17/04 13:18	122	76	DOD vascular
24372	CT THORAX W IV CONTRAST	40	White	M	1/23/05 13:32	150	55	DOD vascular
24378	CT THORAX W IV CONTRAST	47	White	M	2/18/05 19:02	144	68	DOD vascular
24379	CT THORAX W IV CONTRAST	19	White	F	10/23/04 17:09	55	138	DOD vascular
24380	CT ABDOMEN W IV CONTRAST	29	White	M	12/30/04 19:09	121	107	DOD vascular
24384	CT ABDOMEN W IV CONTRAST	28	White	M	4/9/05 11:40	149	108	DOD vascular
24394	CONTRAST	31	White	M	3/26/05 22:30	127	103	DOD vascular
24395	CT THORAX W IV CONTRAST	33	White	M	10/22/04 21:20	130	82	DOD vascular
24400	CT THORAX W IV CONTRAST	32	White	M	12/24/04 17:32	149	97	DOD vascular
24412	CONTRAST	20	Other	M	3/30/05 16:23	117	90	DOD vascular
24413	CT THORAX W IV CONTRAST	18	White	M	1/17/05 4:52	106	128	DOD vascular
24414	CT THORAX W IV CONTRAST	41	White	M	1/26/05 4:57	195	112	DOD vascular
24425	CONTRAST	24	White	F	6/9/05 19:56	131	108	DOD vascular
24426	CT THORAX W IV CONTRAST	31	White	F	5/8/05 4:41	142	135	DOD vascular
24427	CT THORAX W IV CONTRAST	42	White	M	6/19/05 14:42	142	108	DOD vascular
24428	CONTRAST	42	White	M	6/3/05 3:43	145	81	DOD vascular
24431	CONTRAST	20	White	F	6/8/05 11:18	134	108	DOD vascular
24432	CT THORAX W IV CONTRAST	27	White	M	7/26/05 14:43	182	91	DOD vascular
24436	CT THORAX W IV CONTRAST	41	White	F	6/17/05 11:38	44	116	DOD vascular
24439	CT THORAX W IV CONTRAST	20	White	M	6/19/05 5:04	140	98	DOD vascular
24441	CT THORAX W IV CONTRAST	25	White	M	6/12/05 2:52	146	105	DOD vascular
24451	CT THORAX W IV CONTRAST	39	White	M	7/2/05 19:25	102	86	DOD vascular
24458	CT THORAX W IV CONTRAST	21	White	M	6/24/05 21:27	142	127	DOD vascular
24459	CONTRAST	32	White	M	7/24/05 9:00	133	87	DOD vascular
24460	CT THORAX W IV CONTRAST	19	White	M	7/28/05 23:37	123	84	DOD vascular
24463	CT THORAX W IV CONTRAST	44	White	M	5/11/05 10:31	200	117	DOD vascular
24464	CT THORAX W IV CONTRAST	37	White	M	5/16/05 20:26	173	83	DOD vascular
24465	CONTRAST	19	White	M	6/13/05 17:45	144	84	DOD vascular
24470	CONTRAST	49	White	M	6/26/05 0:09	114	75	DOD vascular
24471	CT THORAX W IV CONTRAST	23	White	F	6/26/05 19:17	147	144	DOD vascular
24472	CONTRAST	31	White	M	7/6/05 21:05	142	62	DOD vascular
24476	CT THORAX W IV CONTRAST	25	White	M	7/27/05 14:29	129	97	DOD vascular
24478	CT THORAX W IV CONTRAST	46	White	M	6/10/05 11:54	114	114	DOD vascular

24482	CT ABDOMEN W IV CONTRAST	41	White	M	7/19/05 10:58	93	135	DOD vascular
24488	CT THORAX W IV CONTRAST CT ABDOMEN W IV	33	Black	M	5/13/05 20:17	154	89	DOD vascular
24489	CONTRAST	22	White	F	6/8/05 12:25	115	91	DOD vascular
24490	CT THORAX W IV CONTRAST	20	Black	M	6/10/05 2:10	155	86	DOD vascular
24491	CT THORAX W IV CONTRAST CT ABDOMEN W IV	22	White	M	6/22/05 8:04	154	83	DOD vascular
24495	CONTRAST	43	White	M	7/30/05 21:17	210	122	DOD vascular
24496	CT THORAX W IV CONTRAST	21	Black	M	8/2/06 8:03	121	77	DOD vascular
24519	CT THORAX W IV CONTRAST	44	White	M	11/17/06 19:25	141	78	DOD vascular
24522	CT THORAX W IV CONTRAST	38	White	F	10/3/06 10:41	143	94	DOD vascular
24528	CT THORAX W IV CONTRAST	25	White	M	10/18/06 8:59	167	113	DOD vascular
24529	CT THORAX W IV CONTRAST	24	White	M	8/18/06 3:57	157	112	DOD vascular
24534	CT THORAX W IV CONTRAST	20	White	M	4/27/08 18:06	159	97	DOD vascular
24538	CT THORAX W IV CONTRAST	20	White	M	8/16/06 7:24	146	97	DOD vascular
24540	CT THORAX W IV CONTRAST CT ABDOMEN W IV	18	White	M	9/27/06 16:35	131	99	DOD vascular
24543	CONTRAST	28	White	M	10/13/06 21:50	135	74	DOD vascular
24545	CT THORAX W IV CONTRAST	46	White	M	10/3/06 18:30	152	81	DOD vascular
24547	CT THORAX W IV CONTRAST CT ABDOMEN W IV	43	White	M	10/7/06 19:41	174	97	DOD vascular
24548	CONTRAST	50	White	M	9/2/06 2:25	154	82	DOD vascular
24564	CT THORAX W IV CONTRAST	40	White	M	8/3/06 17:22	155	90	DOD vascular
24566	CT THORAX W IV CONTRAST	21	White	M	10/11/06 2:40	148	164	DOD vascular
24569	CT THORAX W IV CONTRAST	23		M	11/3/06 12:04	146	72	DOD vascular
24576	CT THORAX W IV CONTRAST	21	White	M	8/3/06 17:08	140	82	DOD vascular
24579	CT THORAX W IV CONTRAST	21	Black	M	8/13/06 15:36	169	61	DOD vascular
24580	CT THORAX W IV CONTRAST	32	Hispanic	M	8/15/06 10:04	178	109	DOD vascular
24600	CT THORAX W IV CONTRAST	40	White	M	8/21/06 18:32	194	123	DOD vascular
24602	CT THORAX W IV CONTRAST	41	White	M	9/9/06 18:52	175	82	DOD vascular
24603	CT THORAX W IV CONTRAST CT ABDOMEN W IV	25	White	M	9/16/06 16:28	157	117	DOD vascular
24612	CONTRAST	30	White	F	10/13/06 13:59	132	117	DOD vascular
24613	CT THORAX W IV CONTRAST	49	White	M	10/15/06 22:11	176	103	DOD vascular
24616	CT THORAX W IV CONTRAST CT ABDOMEN W IV	43	White	M	11/7/06 8:40	183	99	DOD vascular
24620	CONTRAST	21	White	M	1/5/07 23:27	120	96	DOD vascular
24626	CT THORAX W IV CONTRAST	31	White	M	3/8/08 3:55	189	102	DOD vascular
24629	CT THORAX W IV CONTRAST	24	White	F	12/8/07 6:50	100	115	DOD vascular
24630	CT THORAX W IV CONTRAST	32	White	M	7/3/07 10:50	123	105	DOD vascular
24632	CT THORAX W IV CONTRAST	29	Black	M	9/8/06 12:43	141	90	DOD vascular
24633	CT THORAX W IV CONTRAST	47	White	M	8/21/06 22:22	151	99	DOD vascular
24635	CT THORAX W IV CONTRAST	22	White	M	8/29/06 18:08	154	76	DOD vascular
24638	CT THORAX W IV CONTRAST	41	Asian	M	8/3/06 5:20	123	103	DOD vascular
24641	CT THORAX W IV CONTRAST CT ABDOMEN W IV	24	White	M	9/17/06 7:45	105	80	DOD vascular
24643	CONTRAST	40	White	M	10/10/06 6:01	117	113	DOD vascular
24645	CT THORAX W IV CONTRAST	47	White	F	10/27/06 1:20	142	112	DOD vascular

24655	CT THORAX W IV CONTRAST	43	White	M	12/17/06 2:53	138	84	DOD vascular
24657	CT THORAX W IV CONTRAST	46	Black	F	10/6/07 11:53	135	100	DOD vascular
24860	CT ABDOMEN PELVIS W IV CONTRAST	34	White	M	1/6/12 16:42	143	112	DOD vascular
24861	CT ABDOMEN PELVIS W IV CONTRAST	23	White	M	1/22/12 3:28	149	85	DOD vascular
25274	CT ABDOMEN PELVIS W IV CONTRAST	20	White	F	1/22/12 4:46	103	79	DOD vascular
27566	CT THORAX W IV CONTRAST	19	White	M	4/10/12 4:28	99	73	DOD vascular
29408	CT ABDOMEN PELVIS W IV CONTRAST	46	White	F	4/4/12 9:10	121	61	DOD vascular
35537	CT OUTSIDE FILM CONSULT ABDOMEN	18	White	M	7/31/10 8:13	94	83	DOD vascular
35582	CT THORAX W IV CONTRAST	32	White	F	10/22/11 17:07	138	66	DOD vascular
35591	CT THORAX W IV CONTRAST	45	White	M	7/22/06 16:27	114	87	DOD vascular
35639	CT THORAX W IV CONTRAST	24	White	M	6/10/06 0:00	134	92	DOD vascular
35643	CT ABDOMEN W IV CONTRAST	28	White	F	9/18/10 12:18	118	99	DOD vascular
35652	CT THORAX W IV CONTRAST	41	White	M	2/28/04 18:01	138	83	DOD vascular
36653	CT ABDOMEN W IV CONTRAST	19	White	M	11/30/03 4:26	104	61	DOD vascular
36655	CT THORAX W IV CONTRAST	18	White	F	3/13/07 18:44	100	132	DOD vascular
40205	CHEST ABDOMEN PELVIS	33	White	M	10/2/06 8:03	123	94	DOD vascular
40207	CHEST ABDOMEN PELVIS	48	White	M	11/3/05 14:46	115	109	DOD vascular
41592	CT ABDOMEN PELVIS W IV CONTRAST	44	White	M	4/5/12 12:36	152	67	DOD vascular
41676	CT OUTSIDE FILM CONSULT ABDOMEN	36	White	M	6/13/10 6:10	135	82	DOD vascular
42190	CT ABDOMEN PELVIS W IV CONTRAST	37	White	M	12/4/11 21:59	135	98	DOD vascular
42913	ABDOMEN PELVIS	43	White	M	10/25/02 11:10	124	111	DOD vascular
48034	CT ABDOMEN PELVIS W IV CONTRAST	43	White	M	7/9/12 1:38	128	87	DOD vascular
48078	CT ABDOMEN PELVIS W IV CONTRAST	46	White	M	10/13/11 8:47	122	92	DOD vascular
48812	CT THORAX W IV CONTRAST	30	White	M	1/6/12 21:35	147	85	DOD vascular
49395	CT THORAX W IV CONTRAST	31	White	M	10/15/10 16:22	125	91	DOD vascular
49396	CT ABDOMEN W IV CONTRAST	40	White	M	8/25/10 21:46	85	75	DOD vascular
49424	CT THORAX W IV CONTRAST	48	White	M	9/7/10 17:59	170	93	DOD vascular
49428	CT THORAX W IV CONTRAST	21	White	M	9/3/10 18:12	152	116	DOD vascular
49462	CT THORAX W IV CONTRAST	36	White	M	8/26/10 22:23	159	96	DOD vascular
49464	CT THORAX W IV CONTRAST	35	White	M	8/26/10 22:05	140	82	DOD vascular
49470	CT THORAX W IV CONTRAST	47	White	M	8/20/05 19:00	172	102	DOD vascular
49472	CT THORAX W IV CONTRAST	22	White	M	7/16/04 23:38	139	110	DOD vascular
49473	CT THORAX W IV CONTRAST	21	White	F	8/8/05 23:38	145	98	DOD vascular
49484	CT THORAX W IV CONTRAST	45	White	M	8/6/05 22:04	68	118	DOD vascular
49488	CT THORAX W IV CONTRAST	22	White	M	8/13/05 5:49	133	90	DOD vascular
49494	CT THORAX W IV CONTRAST	49	White	F	8/16/05 17:10	135	90	DOD vascular
49496	CT THORAX W IV CONTRAST	43	Asian	F	9/10/05 11:09	133	89	DOD vascular
49508	CT ABDOMEN W IV CONTRAST	18	White	M	8/6/05 11:06	150	60	DOD vascular

49536	CT OUTSIDE FILM CONSULT CHEST	50	White	M	12/12/10 21:18	145	79	DOD vascular
49564	CT ABDOMEN W IV CONTRAST	21	White	M	11/8/08 8:22	120	84	DOD vascular
49621	CT THORAX W IV CONTRAST	30	White	M	9/8/11 8:05	123	72	DOD vascular
49636	CT THORAX W IV CONTRAST	33	White	M	10/22/05 18:07	153	98	DOD vascular
49648	CT THORAX W IV CONTRAST	20	Black	M	4/10/11 4:05	152	94	DOD vascular
49651	CT THORAX W IV CONTRAST	30	Black	M	3/23/11 22:34	152	110	DOD vascular
49656	CT THORAX W IV CONTRAST CT ABDOMEN W IV	41	Hispanic	M	2/3/11 21:11	139	97	DOD vascular
49658	CONTRAST CT ABDOMEN PELVIS W IV	30	Black	M	10/30/10 2:26	145	87	DOD vascular
49852	CONTRAST	34	White	M	6/3/11 13:02	95	88	DOD vascular
50374	CT THORAX W IV CONTRAST CT ABDOMEN W IV	23	White	F	12/14/08 2:56	136	107	DOD vascular
50378	CONTRAST CT ABDOMEN W IV	38	White	M	9/28/05 23:39	158	85	DOD vascular
50380	CONTRAST	46	Other	F	3/7/04 13:33	112	133	DOD vascular
50382	CT THORAX W IV CONTRAST	49	White	M	7/31/05 3:15	136	97	DOD vascular
50384	CT THORAX W IV CONTRAST	39	White	M	4/10/05 18:20	117	124	DOD vascular
50397	CT THORAX W IV CONTRAST	33	White	M	9/25/05 17:21	206	81	DOD vascular
50406	CT THORAX W IV CONTRAST CT ABDOMEN W IV	30	White	M	7/25/05 19:28	142	78	DOD vascular
50409	CONTRAST	21	White	M	11/8/08 8:22	120	84	DOD vascular
50417	CT THORAX W IV CONTRAST CT ABDOMEN W IV	38	White	M	2/18/06 12:33	127	87	DOD vascular
50419	CONTRAST	29	White	F	7/9/05 10:13	155	65	DOD vascular
50421	CT THORAX W IV CONTRAST	30	White	F	5/17/08 19:43	115	120	DOD vascular
50422	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	26	White	F	2/1/09 15:43	124	100	DOD vascular
50504	CONTRAST CT ABDOMEN PELVIS W IV	36	White	M	7/18/12 5:45	144	60	DOD vascular
50505	CONTRAST	22	White	M	7/14/12 20:09	142	111	DOD vascular
50790	CT THORAX W IV CONTRAST	39	White	F	7/9/05 21:15	127	86	DOD vascular
50809	CT THORAX W IV CONTRAST CT ABDOMEN W IV	24	White	M	5/27/06 12:00	121	100	DOD vascular
50816	CONTRAST	48	White	M	8/25/05 10:05	136	66	DOD vascular
50818	CT THORAX W IV CONTRAST	48	White	M	2/24/04 17:21	57	91	DOD vascular
50834	CT THORAX W IV CONTRAST CT THORAX WO IV	44	White	F	6/21/07 21:20	140	69	DOD vascular
50909	CONTRAST	49	Other	M	11/7/10 0:23	129	87	DOD vascular
50921	CT THORAX W IV CONTRAST	19	Hispanic	F	11/30/10 17:57	127	96	DOD vascular
50923	CT THORAX W IV CONTRAST	19	Hispanic	F	11/30/10 17:57	127	96	DOD vascular
50945	CT THORAX W IV CONTRAST	28	Black	F	12/14/10 16:52	138	103	DOD vascular
50946	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	28	Black	F	12/14/10 16:52	138	103	DOD vascular
51583	CONTRAST	41	White	F	7/27/12 3:32	127	71	DOD vascular
51745	CT THORAX W IV CONTRAST	19	White	M	12/18/05 1:29	156	110	DOD vascular
52480	CT THORAX W IV CONTRAST	35	White	F	9/16/12 19:43	82	79	DOD vascular
52482	CT POST PROCESSED T SPINE CT OUTSIDE FILM CONSULT	31	White	M	9/19/12 8:16	204	34	DOD vascular
52499	ABDOMEN AND PELVIS	38	White	F	7/15/12 8:03	109	88	DOD vascular

52513	CT THORAX W IV CONTRAST	46	White	F	7/19/12 18:27	119	83	DOD vascular
52522	CT POST PROCESSED L SPINE CT OUTSIDE FILM CONSULT	44	Hispanic	F	2/17/13 16:39	118	60	DOD vascular
52532	CHEST	50	White	M	12/31/12 19:23	108	110	DOD vascular
52658	CT THORAX W IV CONTRAST	37	White	M	12/1/12 3:09	145	105	DOD vascular
52662	CT THORAX W IV CONTRAST	19	Unk	M	11/3/12 9:04	128	114	DOD vascular
52665	CT THORAX W IV CONTRAST	19	White	F	9/12/12 21:19	123	101	DOD vascular
52666	CT THORAX W IV CONTRAST	20	Black	M	10/15/12 8:03	126	85	DOD vascular
52667	CT THORAX W IV CONTRAST	19	White	M	11/3/12 8:49	155	85	DOD vascular
52669	CT POST PROCESSED T SPINE	24	White	M	12/24/12 16:14	135	88	DOD vascular
52684	CT THORAX W IV CONTRAST	39	Black	F	7/23/12 15:31	143	92	DOD vascular
52686	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	29	White	M	5/15/12 21:50	154	65	DOD vascular
52687	ABDOMEN AND PELVIS	23	White	M	5/20/12 5:03	142	106	DOD vascular
52689	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	19	White	F	10/20/11 22:02	153	104	DOD vascular
52690	CONTRAST CT ABDOMEN PELVIS W IV	27	Asian	F	10/15/11 8:07	113	79	DOD vascular
52936	CONTRAST	47	White	M	11/23/11 9:14	140	85	DOD vascular
52937	CT THORAX W IV CONTRAST	48	White	M	10/23/11 14:18	177	91	DOD vascular
52938	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	22	White	F	11/15/11 3:18	105	142	DOD vascular
52939	CONTRAST	26	White	M	12/10/11 3:50	148	107	DOD vascular
52945	CT THORAX W IV CONTRAST	50	White	F	12/2/11 19:19	195	76	DOD vascular
52949	CT THORAX W IV CONTRAST	49	White	M	3/5/12 15:23	165	100	DOD vascular
52950	CT THORAX W IV CONTRAST	30	White	F	12/17/11 1:51	98	80	DOD vascular
52952	CT THORAX W IV CONTRAST	33	White	M	12/17/11 1:37	141	90	DOD vascular
52956	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	24	White	F	12/28/11 20:55	110	73	DOD vascular
52957	CHEST	22	White	M	12/21/11 21:22	157	94	DOD vascular
52960	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV	22	White	M	1/2/12 0:37	143	72	DOD vascular
52963	CONTRAST	48	White	F	2/22/12 6:53	140	78	DOD vascular
52968	CT THORAX W IV CONTRAST	48	White	F	3/19/12 15:51	142	110	DOD vascular
52970	CT THORAX W IV CONTRAST	24	White	M	12/18/11 6:10	167	101	DOD vascular
52971	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	32	White	M	12/23/11 3:00	159	139	DOD vascular
52973	CONTRAST CT ABDOMEN PELVIS W IV	20	White	F	12/20/11 15:46	147	102	DOD vascular
52975	CONTRAST CT OUTSIDE FILM CONSULT	27	Black	F	1/23/12 12:08	108	83	DOD vascular
53528	ABDOMEN AND PELVIS	27	White	M	11/22/12 15:26	120	113	DOD vascular
53739	CT THORAX W IV CONTRAST	34	White	M	3/26/06 3:45	119	86	DOD vascular
53743	CT THORAX W IV CONTRAST	23	White	M	2/21/06 19:20	131	96	DOD vascular
53834	CT THORAX W IV CONTRAST	34	Black	M	10/11/11 2:38	152	75	DOD vascular
53837	CT THORAX W IV CONTRAST	48	White	M	10/23/11 14:18	177	91	DOD vascular
53838	CT THORAX W IV CONTRAST	45	White	M	10/8/11 13:17	103	90	DOD vascular
53845	CT THORAX W IV CONTRAST	29	White	M	10/18/11 9:26	127	65	DOD vascular
53846	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	31	White	M	10/22/11 15:50	128	71	DOD vascular
53847	CONTRAST	22	White	M	10/2/11 2:06	159	64	DOD vascular

53849	CT THORAX W IV CONTRAST	31	White	F	10/6/11 9:18	125	78	DOD vascular
53851	CT THORAX W IV CONTRAST	26	Black	M	10/8/11 11:25	145	68	DOD vascular
53854	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	27	White	M	10/2/11 3:39	135	99	DOD vascular
53856	CONTRAST CT ABDOMEN PELVIS W IV	39	Black	F	10/19/11 15:11	104	85	DOD vascular
53858	CONTRAST CT THORAX WO IV	37	White	M	10/23/11 13:50	130	96	DOD vascular
53859	CONTRAST CT OUTSIDE FILM CONSULT	33	Hispanic	F	10/5/11 3:44	119	87	DOD vascular
53875	CHEST CT ABDOMEN PELVIS W IV	21	White	M	10/23/11 20:49	167	76	DOD vascular
53878	CONTRAST	27	American Indian	F	10/24/11 15:59	134	110	DOD vascular
53879	CT THORAX W IV CONTRAST	28	Hispanic	F	10/24/11 22:29	155	94	DOD vascular
53883	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	19	Hispanic	M	10/28/11 1:33	137	124	DOD vascular
53887	CONTRAST CT ABDOMEN PELVIS W IV	39	White	M	11/21/11 4:18	118	67	DOD vascular
53890	CONTRAST	36	White	M	11/15/11 3:32	101	71	DOD vascular
53894	CT THORAX W IV CONTRAST	40	White	M	11/4/11 19:01	156	156	DOD vascular
53899	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	42	White	F	11/10/11 16:17	80	116	DOD vascular
53901	CONTRAST CT ABDOMEN PELVIS W IV	31	White	M	11/10/11 4:45	95	98	DOD vascular
53908	CONTRAST CT ABDOMEN PELVIS W IV	50	White	M	11/29/11 20:05	158	126	DOD vascular
53910	CONTRAST CT OUTSIDE FILM CONSULT	33	White	M	12/13/11 6:52	139	96	DOD vascular
53911	CHEST CT ABDOMEN PELVIS W IV	41	White	M	12/3/11 18:18	119	91	DOD vascular
53914	CONTRAST	45	White	F	12/10/11 9:27	143	77	DOD vascular
53926	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	22	White	M	11/26/11 22:21	134	116	DOD vascular
53928	CONTRAST	22	White	M	11/27/11 7:40	101	88	DOD vascular
53929	CT THORAX W IV CONTRAST	21	Asian	F	12/1/11 22:33	127	102	DOD vascular
53939	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	41	White	M	12/18/11 6:05	193	78	DOD vascular
53941	CHEST CT ABDOMEN PELVIS W IV	34		M	12/23/11 10:14	107	126	DOD vascular
53956	CONTRAST CT ABDOMEN PELVIS W IV	34	White	M	1/13/12 15:58	158	75	DOD vascular
53957	CONTRAST	20	White	M	1/13/12 1:51	137	98	DOD vascular
53960	CT POST PROCESSED L SPINE	26	White	F	1/25/12 23:41	143	100	DOD vascular
53965	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	32	Black	F	2/10/12 10:46	142	106	DOD vascular
53966	CONTRAST CT ABDOMEN PELVIS W IV	25	Black	F	2/4/12 5:00	129	94	DOD vascular
53969	CONTRAST CT ABDOMEN PELVIS W IV	19	White	M	1/28/12 11:38	139	66	DOD vascular
53972	CONTRAST	37	White	M	2/3/12 6:10	144	129	DOD vascular
53974	CT THORAX W IV CONTRAST	46	White	M	2/10/12 21:34	171	100	DOD vascular
53979	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	35	White	F	3/5/12 17:48	185	88	DOD vascular
53985	CONTRAST	49	White	M	2/24/12 9:00	78	73	DOD vascular

53989	CT POST PROCESSED T SPINE	44	White	F	3/5/12 13:10	128	72	DOD vascular
53997	CT THORAX W IV CONTRAST	30	White	M	2/19/12 19:48	103	114	DOD vascular
53999	CT POST PROCESSED T SPINE	24	White	F	3/11/12 5:19	131	81	DOD vascular
54000	CT THORAX W IV CONTRAST	43	White	M	3/19/12 18:03	169	114	DOD vascular
54001	CT THORAX W IV CONTRAST	43	White	F	3/19/12 17:57	118	84	DOD vascular
54005	CT THORAX W IV CONTRAST	48	White	F	3/18/12 20:04	156	107	DOD vascular
54017	CT THORAX W IV CONTRAST	19	White	M	3/31/12 2:56	164	103	DOD vascular
54023	CT ABDOMEN PELVIS W IV CONTRAST	48	White	M	3/30/12 15:45	199	98	DOD vascular
54025	CT THORAX W IV CONTRAST	25	White	M	4/18/12 17:41	142	85	DOD vascular
54026	CT ABDOMEN PELVIS W IV CONTRAST	19	Black	F	4/14/12 9:40	109	73	DOD vascular
54027	CT ABDOMEN PELVIS W IV CONTRAST	46	White	F	4/14/12 12:10	101	70	DOD vascular
54028	CT THORAX W IV CONTRAST	24	White	F	4/17/12 20:10	151	88	DOD vascular
54033	CT THORAX W IV CONTRAST	24	White	F	7/20/12 22:40	133	113	DOD vascular
54044	CT THORAX W IV CONTRAST	25	Unk	M	4/26/12 15:40	122	121	DOD vascular
54049	CT THORAX W IV CONTRAST	28	White	M	5/6/12 19:52	152	65	DOD vascular
54050	CT THORAX W IV CONTRAST	19	White	F	5/6/12 20:22	145	115	DOD vascular
54052	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	37	Asian	M	7/6/12 3:15	147	128	DOD vascular
54055	CT ABDOMEN PELVIS W IV CONTRAST	27	White	F	7/15/12 4:16	148	93	DOD vascular
54057	CT POST PROCESSED T SPINE	30	Unk	M	7/8/12 3:12	125	82	DOD vascular
54063	CT POST PROCESSED T SPINE	43	White	M	7/21/12 3:11	163	80	DOD vascular
54064	CT THORAX W IV CONTRAST	19	White	M	7/21/12 0:58	143	102	DOD vascular
54067	CT THORAX W IV CONTRAST	26	White	M	7/25/12 2:31	111	96	DOD vascular
54069	CT ABDOMEN PELVIS W IV CONTRAST	50	White	M	7/3/12 17:11	162	111	DOD vascular
54073	CT THORAX W IV CONTRAST	29	White	F	6/29/12 23:56	143	80	DOD vascular
54077	CT THORAX W IV CONTRAST	26	White	F	7/30/12 0:54	110	81	DOD vascular
54080	CT ABDOMEN PELVIS W IV CONTRAST	23	White	F	7/31/12 19:33	134	76	DOD vascular
54084	CT ABDOMEN PELVIS W IV CONTRAST	21	White	M	8/4/12 11:47	140	118	DOD vascular
54087	CT ABDOMEN PELVIS W IV CONTRAST	21	White	M	8/5/12 2:23	149	116	DOD vascular
54088	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	24	White	F	8/6/12 5:09	129	116	DOD vascular
54106	CT THORAX W IV CONTRAST	44	White	M	8/22/12 0:16	147	80	DOD vascular
54108	CT ABDOMEN PELVIS W IV CONTRAST	48	White	F	6/28/12 2:19	89	72	DOD vascular
54110	CT ABDOMEN PELVIS W IV CONTRAST	25	White	M	5/30/12 16:38	182	137	DOD vascular
54111	CT OUTSIDE FILM CONSULT CHEST	23	Black	M	8/21/12 3:04	137	88	DOD vascular
54158	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	40	Black	M	8/2/12 4:53	69	126	DOD vascular
54165	CT THORAX W IV CONTRAST	43	White	M	5/26/12 18:52	127	86	DOD vascular
54166	CT ABDOMEN PELVIS W IV CONTRAST	50	White	F	5/24/12 20:15	122	90	DOD vascular
54170	CT THORAX W IV CONTRAST	19	White	M	5/12/12 17:10	141	86	DOD vascular



54173	CT THORAX W IV CONTRAST	37	White	M	5/22/12 18:22	170	155	DOD vascular
54174	CT ABDOMEN PELVIS W IV	33	White	M	5/23/12 14:03	133	72	DOD vascular
54175	CONTRAST	18	White	M	6/13/12 11:27	110	91	DOD vascular
54177	CT OUTSIDE FILM CONSULT	24	Black	M	6/13/12 4:10	151	100	DOD vascular
54181	ABDOMEN	23	White	M	8/12/12 1:56	162	104	DOD vascular
54183	CT THORAX W IV CONTRAST	39	White	M	4/29/12 16:33	138	85	DOD vascular
54189	CT POST PROCESSED L SPINE	27	White	F	8/21/12 14:21	126	86	DOD vascular
54197	CT ABDOMEN PELVIS W IV	30	Other	M	5/4/12 4:12	124	111	DOD vascular
54203	CONTRAST	23	White	F	5/15/12 21:25	102	97	DOD vascular
54209	CT THORAX W IV CONTRAST	50	White	M	6/8/12 7:53	150	126	DOD vascular
54211	CT ABDOMEN PELVIS W IV	20	White	F	6/15/12 6:49	112	88	DOD vascular
54213	CONTRAST	22	White	M	6/4/12 2:17	111	79	DOD vascular
54215	CT ABDOMEN PELVIS W IV	22	Black	F	6/2/12 22:23	114	99	DOD vascular
54217	CONTRAST	35	White	F	5/28/12 8:17	140	86	DOD vascular
54218	CT ABDOMEN PELVIS W IV	32	Other	M	6/1/12 16:17	163	74	DOD vascular
54308	CONTRAST	45	White	M	9/4/12 0:51	133	98	DOD vascular
54311	CT THORAX W IV CONTRAST	30	White	M	9/4/12 3:27	141	68	DOD vascular
54312	CT OUTSIDE FILM CONSULT	31	White	M	9/5/12 18:35	121	82	DOD vascular
54316	ABDOMEN AND PELVIS	23	Unk	M	9/7/12 0:52	128	105	DOD vascular
54317	CT THORAX W IV CONTRAST	23	White	F	9/7/12 7:06	104	52	DOD vascular
54319	CONTRAST	45	White	F	9/9/12 15:58	78	111	DOD vascular
54320	CT THORAX W IV CONTRAST	44	White	M	6/30/12 19:03	156	95	DOD vascular
54322	CT THORAX W IV CONTRAST	26	White	M	6/22/12 19:26	121	85	DOD vascular
54323	CT ABDOMEN PELVIS W IV	25	White	M	6/16/12 3:43	154	87	DOD vascular
54324	CONTRAST	19	White	M	6/30/12 17:03	120	78	DOD vascular
54326	CT POST PROCESSED L SPINE	43	White	F	6/19/12 20:44	141	105	DOD vascular
54328	CT ABDOMEN PELVIS W IV	21	White	M	6/29/12 23:31	128	77	DOD vascular
54330	CONTRAST	24	White	M	6/16/12 2:57	113	85	DOD vascular
54331	CT ABDOMEN PELVIS WO IV	36	White	M	6/23/12 19:59	147	59	DOD vascular
54335	CONTRAST	40	White	F	9/3/12 19:48	158	117	DOD vascular
54337	CT THORAX W IV CONTRAST	49	White	M	9/1/12 22:25	121	60	DOD vascular
54340	CT OUTSIDE FILM CONSULT	44	White	F	8/31/12 21:17	87	130	DOD vascular
54342	CHEST	50	White	F	8/12/12 18:05	90	128	DOD vascular
54356	CT THORAX W IV CONTRAST	43	White	F	9/12/12 2:45	123	88	DOD vascular
	CT ABDOMEN PELVIS W IV							
	CONTRAST							

54357	CT ABDOMEN PELVIS W IV CONTRAST	30	White	M	9/13/12 15:25	136	111	DOD vascular
54358	CT ABDOMEN PELVIS W IV CONTRAST	28	White	M	9/14/12 21:38	118	102	DOD vascular
54360	CT ABDOMEN PELVIS W IV CONTRAST	38	White	F	9/15/12 14:49	115	88	DOD vascular
54361	CT ABDOMEN PELVIS WO W IV CONTRAST	46	Black	F	9/11/12 23:13	118	90	DOD vascular
54365	CT ABDOMEN PELVIS W IV CONTRAST	33	White	F	9/10/12 14:21	140	75	DOD vascular
54368	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV CONTRAST	40	White	M	9/15/12 19:44	130	72	DOD vascular
54371	CT POST PROCESSED L SPINE	40	White	F	9/17/12 13:32	105	70	DOD vascular
54372	CT POST PROCESSED L SPINE	24	White	F	9/21/12 6:46	78	120	DOD vascular
54373	CT THORAX W IV CONTRAST	21	White	M	9/28/12 17:18	133	102	DOD vascular
54374	CT POST PROCESSED T SPINE	26	White	M	9/19/12 18:03	165	77	DOD vascular
54376	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	25	White	M	9/25/12 22:41	137	93	DOD vascular
54377	CT THORAX W IV CONTRAST	20	White	F	9/26/12 1:40	143	103	DOD vascular
54379	CT THORAX W IV CONTRAST	41	White	M	9/28/12 22:46	166	101	DOD vascular
54380	CT THORAX W IV CONTRAST	49	White	M	10/1/12 19:02	153	97	DOD vascular
54381	CT THORAX W IV CONTRAST	23	White	M	9/30/12 19:20	141	62	DOD vascular
54393	CT THORAX W IV CONTRAST	36	White	M	10/28/12 19:19	178	56	DOD vascular
54396	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	29	Other	F	10/2/12 16:55	117	81	DOD vascular
54400	CT ABDOMEN PELVIS W IV CONTRAST	29	White	F	10/4/12 22:20	118	148	DOD vascular
54401	CT ABDOMEN PELVIS W IV CONTRAST	30	White	M	10/6/12 19:26	69	87	DOD vascular
54405	CT THORAX W IV CONTRAST	26	White	F	10/3/12 23:24	144	105	DOD vascular
54416	CT THORAX W IV CONTRAST	20	White	M	10/24/12 23:00	113	80	DOD vascular
54418	CT THORAX W IV CONTRAST	32	Black	M	10/22/12 22:36	122	83	DOD vascular
54420	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	42	White	F	10/18/12 15:29	142	87	DOD vascular
54421	CT ABDOMEN PELVIS W IV CONTRAST	29	American Indian	M	10/16/12 16:11	120	113	DOD vascular
54423	CT ABDOMEN PELVIS W IV CONTRAST	20	White	M	10/20/12 4:22	163	103	DOD vascular
54426	CT ABDOMEN PELVIS W IV CONTRAST	26	Other	F	10/20/12 20:28	125	82	DOD vascular
54429	CT ABDOMEN PELVIS W IV CONTRAST	28	White	M	11/4/12 2:41	133	90	DOD vascular
54431	CT THORAX W IV CONTRAST	49	Asian	M	11/10/12 13:30	141	73	DOD vascular
54432	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	20	White	M	11/4/12 0:56	107	88	DOD vascular
54437	CHEST CT ABDOMEN PELVIS W IV CONTRAST	43	White	M	12/23/12 23:34	133	64	DOD vascular
54438	CT ABDOMEN PELVIS W IV CONTRAST	19	White	F	11/27/12 13:33	147	64	DOD vascular
54514	CT ABDOMEN PELVIS W IV CONTRAST	24	Unk	M	11/23/12 22:51	135	80	DOD vascular
54518	CT ABDOMEN PELVIS W IV CONTRAST	27	White	F	11/22/12 13:17	140	140	DOD vascular
54519	CT THORAX W IV CONTRAST	26	Black	M	11/24/12 3:56	153	100	DOD vascular
54535	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	19	Asian	F	12/12/12 16:51	118	94	DOD vascular
54540	CT ABDOMEN PELVIS W IV CONTRAST	25	White	F	12/18/12 22:55	160	98	DOD vascular

55254	CT POST PROCESSED T SPINE	32	Black	F	2/20/13 17:49	125	82	DOD vascular
55782	CT THORAX W IV CONTRAST	42	White	F	8/6/05 13:40	97	105	DOD vascular
56354	CT THORAX W IV CONTRAST CT ABDOMEN W IV	25	White	M	9/2/03 20:08	150	79	DOD vascular
56382	CONTRAST CT ABDOMEN PELVIS W IV	18	White	F	7/15/04 16:14	113	130	DOD vascular
57875	CONTRAST	22	White	M	7/12/11 2:02	137	74	DOD vascular
57878	CT THORAX W IV CONTRAST	27	White	M	7/12/05 19:11	136	68	DOD vascular
57880	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	19	White	F	6/11/05 23:58	108	109	DOD vascular
57887	CONTRAST	35	White	M	8/23/11 16:57	106	69	DOD vascular
57888	CT THORAX W IV CONTRAST	29	White	F	9/13/05 2:14	123	113	DOD vascular
57893	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	46	White	M	8/19/05 19:05	98	89	DOD vascular
57894	CONTRAST	47	White	M	7/2/11 19:13	131	59	DOD vascular
57898	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	37	White	M	6/26/05 17:54	133	90	DOD vascular
57903	CONTRAST CT ABDOMEN PELVIS W IV	19	White	M	8/15/11 12:34	134	93	DOD vascular
57917	CONTRAST	20	White	M	4/10/11 1:44	124	64	DOD vascular
57947	CT THORAX W IV CONTRAST CT ABDOMEN W IV	18	White	M	7/30/03 4:51	110	68	DOD vascular
57950	CONTRAST CT ABDOMEN PELVIS W IV	44	White	M	7/11/10 18:29	155	70	DOD vascular
57954	CONTRAST CT ABDOMEN W IV	42	White	M	1/23/11 15:30	145	85	DOD vascular
57955	CONTRAST	42	White	M	8/21/10 15:20	128	76	DOD vascular
57985	CT THORAX W IV CONTRAST	42	Black	F	12/26/04 11:23	149	74	DOD vascular
57991	CT THORAX W IV CONTRAST	45	White	F	11/24/04 17:46	146	101	DOD vascular
57996	CT THORAX W IV CONTRAST	48	White	M	3/24/05 21:19	139	96	DOD vascular
57998	CT THORAX W IV CONTRAST CT ABDOMEN W IV	36	White	F	8/29/04 0:16	131	117	DOD vascular
58006	CONTRAST CT ABDOMEN W IV	25	White	M	9/4/03 20:49	132	99	DOD vascular
58007	CONTRAST	20	White	M	2/19/04 17:19	122	93	DOD vascular
58016	CT THORAX W IV CONTRAST CT ABDOMEN W IV	19	White	M	5/26/03 7:35	155	102	DOD vascular
58024	CONTRAST CT ABDOMEN W IV	45	White	M	11/18/03 17:08	158	75	DOD vascular
58030	CONTRAST	19	White	M	1/11/04 2:20	136	97	DOD vascular
58032	CT THORAX W IV CONTRAST	45		M	2/26/04 15:37	158	85	DOD vascular
58036	CT THORAX W IV CONTRAST	49	White	F	9/29/05 14:31	122	95	DOD vascular
58039	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	49	White	M	9/27/05 2:05	103	126	DOD vascular
58074	CONTRAST CT ABDOMEN PELVIS W IV	23	White	F	4/29/11 2:45	115	115	DOD vascular
58075	CONTRAST CT OUTSIDE FILM CONSULT	43	Hispanic	M	3/20/11 19:40	123	96	DOD vascular
58104	CHEST	32	Black	F	12/29/06 7:07	124	79	DOD vascular
58106	CT THORAX W IV CONTRAST	21	White	F	10/31/05 10:40	134	136	DOD vascular
58111	CT THORAX W IV CONTRAST	40	White	M	11/5/05 8:38	145	64	DOD vascular
58154	CT POST PROCESSED L SPINE	20	White	F	8/7/13 15:17	116	109	DOD vascular
58284	CT THORAX W IV CONTRAST	18	White	M	5/20/13 19:30	145	110	DOD vascular

58287	CT OUTSIDE FILM CONSULT CHEST	19	White	M	7/27/08 21:08	129	61	DOD vascular
58288	CT THORAX W IV CONTRAST	38	White	F	6/14/08 11:12	120	94	DOD vascular
58294	CT THORAX W IV CONTRAST	43	White	M	10/5/07 7:30	151	77	DOD vascular
59114	CT ABDOMEN PELVIS W IV CONTRAST	40	Other	M	8/3/13 0:21	84	104	DOD vascular
59162	CT THORAX W IV CONTRAST	47	White	M	11/4/03 20:53	117	93	DOD vascular
59179	CT ABDOMEN PELVIS W IV CONTRAST	27	Asian	F	1/4/13 13:01	111	82	DOD vascular
59293	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	21	White	M	4/7/13 4:24	107	98	DOD vascular
59296	CT ABDOMEN PELVIS W IV CONTRAST	42	White	M	4/7/13 2:49	140	95	DOD vascular
59297	CT ABDOMEN PELVIS W IV CONTRAST	28	White	M	4/7/13 2:08	128	97	DOD vascular
59298	CT ABDOMEN PELVIS WO IV CONTRAST	42	White	F	4/7/13 20:41	122	96	DOD vascular
59318	CT ABDOMEN PELVIS W IV CONTRAST	44	White	M	4/12/13 21:41	160	89	DOD vascular
59320	CT ABDOMEN PELVIS W IV CONTRAST	41	Other	M	4/14/13 19:23	141	92	DOD vascular
59324	CT ABDOMEN PELVIS W IV CONTRAST	22	White	M	4/20/13 3:17	139	84	DOD vascular
59325	CT ABDOMEN PELVIS W IV CONTRAST	26	White	M	11/15/12 19:48	166	84	DOD vascular
59330	CT ABDOMEN PELVIS W IV CONTRAST	34	White	M	12/2/12 1:34	134	79	DOD vascular
59331	CT ABDOMEN PELVIS W IV CONTRAST	33	White	F	11/16/12 13:33	132	84	DOD vascular
59340	CT ABDOMEN PELVIS W IV CONTRAST	39	White	M	1/17/13 8:52	203	82	DOD vascular
59341	CT ABDOMEN PELVIS W IV CONTRAST	30	Black	F	1/17/13 8:24	113	76	DOD vascular
59343	CT ABDOMEN PELVIS W IV CONTRAST	24	White	M	1/22/13 6:33	132	88	DOD vascular
59344	CT ABDOMEN PELVIS W IV CONTRAST	33	White	F	1/14/13 20:45	104	85	DOD vascular
59345	CT ABDOMEN PELVIS W IV CONTRAST	43	White	F	1/16/13 16:25	108	68	DOD vascular
59355	CT ABDOMEN PELVIS W IV CONTRAST	46	White	M	1/24/13 20:41	136	130	DOD vascular
59369	CT OUTSIDE FILM CONSULT BRAIN	33	White	F	2/11/13 9:51	122	88	DOD vascular
59370	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	37	White	F	2/17/13 22:33	162	98	DOD vascular
59371	CT ABDOMEN PELVIS W IV CONTRAST	18	White	M	2/23/13 21:37	154	82	DOD vascular
59375	CT ABDOMEN PELVIS W IV CONTRAST	45	White	M	2/23/13 0:40	153	82	DOD vascular
59377	CT ABDOMEN PELVIS W IV CONTRAST	33	White	M	2/16/13 16:27	147	100	DOD vascular
59378	CT OUTSIDE FILM CONSULT CHEST	34	White	M	3/4/13 19:29	129	108	DOD vascular
59382	CT ABDOMEN PELVIS W IV CONTRAST	26	White	F	3/15/13 4:23	104	83	DOD vascular
59385	CT ABDOMEN PELVIS W IV CONTRAST	30	White	M	3/3/13 23:12	149	114	DOD vascular

59386	CT ABDOMEN PELVIS W IV CONTRAST	27	White	M	3/6/13 5:26	168	68	DOD vascular
59387	CT ABDOMEN PELVIS W IV CONTRAST	41	White	M	3/18/13 18:30	191	95	DOD vascular
59389	CT ABDOMEN PELVIS W IV CONTRAST	21	Other	M	3/10/13 3:59	119	111	DOD vascular
59390	CT ABDOMEN PELVIS W IV CONTRAST	40	White	M	2/18/13 10:31	125	62	DOD vascular
59391	CT ABDOMEN PELVIS W IV CONTRAST	44	White	F	2/21/13 16:41	98	126	DOD vascular
59396	CT OUTSIDE FILM CONSULT CHEST	43	White	M	1/1/13 5:49	127	67	DOD vascular
59397	CT ABDOMEN PELVIS W IV CONTRAST	25	White	F	1/1/13 4:03	143	104	DOD vascular
59484	CT ABDOMEN PELVIS W IV CONTRAST	31	White	M	3/26/13 20:07	122	99	DOD vascular
59486	CT ABDOMEN PELVIS W IV CONTRAST	24	White	F	3/24/13 15:23	126	106	DOD vascular
59488	CT ABDOMEN PELVIS W IV CONTRAST	19	White	M	3/30/13 0:06	125	83	DOD vascular
59489	CT ABDOMEN PELVIS W IV CONTRAST	24	White	F	3/23/13 11:56	141	87	DOD vascular
59491	CT ABDOMEN PELVIS W IV CONTRAST	38	Black	F	4/27/13 17:25	185	91	DOD vascular
59493	CT ABDOMEN PELVIS W IV CONTRAST	41	White	M	4/27/13 5:14	125	88	DOD vascular
59517	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	45	White	M	5/1/13 3:41	155	125	DOD vascular
59519	CT ABDOMEN PELVIS W IV CONTRAST	28	White	M	5/2/13 9:56	136	80	DOD vascular
59520	CT ABDOMEN PELVIS W IV CONTRAST	18	White	M	4/30/13 19:43	130	102	DOD vascular
59523	CT ABDOMEN PELVIS W IV CONTRAST	25	White	F	5/2/13 18:15	101	113	DOD vascular
59524	CT ABDOMEN PELVIS W IV CONTRAST	23	White	M	5/5/13 9:27	137	83	DOD vascular
59530	CT ABDOMEN PELVIS W IV CONTRAST	22	White	M	5/10/13 19:03	178	100	DOD vascular
59532	CT ABDOMEN PELVIS W IV CONTRAST	26	White	M	5/10/13 23:48	115	105	DOD vascular
59574	CT ABDOMEN PELVIS W IV CONTRAST	45	Black	F	5/16/13 11:09	180	99	DOD vascular
59578	CT ABDOMEN PELVIS W IV CONTRAST	19	White	M	5/22/13 1:25	154	116	DOD vascular
59616	CT ABDOMEN PELVIS W IV CONTRAST	41	White	M	5/26/13 18:04	111	43	DOD vascular
60594	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	33	Pacific Islande	F	8/3/13 20:00	160	76	DOD vascular
60657	CT ABDOMEN PELVIS W IV CONTRAST	22	White	M	11/2/13 6:27	112	113	DOD vascular
60658	CT ABDOMEN PELVIS W IV CONTRAST	20	White	M	11/2/13 6:39	89	138	DOD vascular
60663	CT ABDOMEN W IV CONTRAST	34	Black	M	8/25/10 18:16	158	100	DOD vascular
60682	CT ABDOMEN W IV CONTRAST	45	Black	M	9/22/10 6:37	142	92	DOD vascular
60688	CT ABDOMEN W IV CONTRAST	24	White	F	9/18/10 12:18	129	98	DOD vascular

60918	CT ABDOMEN W IV CONTRAST	18	White	M	6/9/03 22:41	63	155	DOD vascular
60920	CT ABDOMEN W IV CONTRAST	20	White	M	1/23/03 4:34	178	110	DOD vascular
60923	CT PELVIS W IV CONTRAST	20	White	M	3/27/04 10:45	159	81	DOD vascular
60924	CT THORAX W IV CONTRAST	19	Hispanic	M	1/26/04 8:47	144	85	DOD vascular
60926	CT PELVIS W IV CONTRAST	20	White	M	3/8/03 12:10	140	80	DOD vascular
60927	CT THORAX W IV CONTRAST CT ABDOMEN W IV	19	White	M	2/5/05 17:45	158	61	DOD vascular
60934	CONTRAST	19	Hispanic	M	8/6/03 14:07	149	108	DOD vascular
60935	CT THORAX W IV CONTRAST	19	White	M	3/21/04 3:55	140	100	DOD vascular
60947	CT THORAX W IV CONTRAST	20	White	M	7/22/05 17:22	150	94	DOD vascular
60950	CT THORAX W IV CONTRAST CT ABDOMEN W IV	20	White	M	11/3/05 5:50	158	77	DOD vascular
61094	CONTRAST	19	White	M	9/11/10 1:47	159	102	DOD vascular
61095	CT ABDOMEN PELVIS W IV CONTRAST	19	White	F	3/17/11 7:34	132	105	DOD vascular
61154	CT ABDOMEN PELVIS W IV CONTRAST	23	White	M	11/2/13 6:57	138	98	DOD vascular
61590	CT THORAX W IV CONTRAST	49	White	F	12/9/13 18:17	156	99	DOD vascular
61792	CT PELVIS W IV CONTRAST CT ABDOMEN PELVIS W IV	22	White	M	12/1/13 4:14	119	151	DOD vascular
65296	CONTRAST	23	White	M	4/8/14 16:58	173	121	DOD vascular
65490	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	47	White	M	4/6/14 21:01	120	71	DOD vascular
66087	CT ABDOMEN PELVIS W IV CONTRAST	22	White	F	1/27/14 12:25	129	100	DOD vascular
66278	CT THORAX W IV CONTRAST	47		M	4/29/02 14:35	60	145	DOD vascular
66279	CT THORAX W IV CONTRAST CT ABDOMEN W IV	49	Other	F	8/6/04 16:51	74	106	DOD vascular
66280	CONTRAST	30		M	7/25/03 9:06	86	133	DOD vascular
66281	CT THORAX W IV CONTRAST	40	White	M	6/10/05 7:44	41	188	DOD vascular
66282	CT THORAX W IV CONTRAST CT ABDOMEN W IV	34	White	M	8/11/07 9:53	53	130	DOD vascular
66283	CONTRAST	50	White	M	12/20/03 16:52	85	120	DOD vascular
66284	CT THORAX W IV CONTRAST	32	White	M	11/5/06 14:33	83	142	DOD vascular
66285	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	21	White	F	10/15/04 4:50	80	121	DOD vascular
66286	CHEST	49	White	F	11/14/09 22:05	83	117	DOD vascular
66288	CT THORAX W IV CONTRAST	47	White	F	9/10/05 10:56	86	114	DOD vascular
66297	CT THORAX W IV CONTRAST	39	White	M	5/5/08 17:30	86	119	DOD vascular
66298	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	37	Black	M	4/28/09 22:20	83	135	DOD vascular
66300	CHEST	44	White	M	9/23/12 20:37	45	130	DOD vascular
66302	CT ABDOMEN W IV CONTRAST	42	White	M	6/11/00 5:59	77	106	DOD vascular
66522	CT ABDOMEN PELVIS W IV CONTRAST	22	White	M	7/10/14 1:23	145	87	DOD vascular
66526	CT ANGIO RUNOFF ARTERIES ABD WO AND W CONTRAST	18	White	M	10/14/13 13:23	115	83	DOD vascular
66703	CT ABDOMEN W IV CONTRAST	43	Black	F	4/12/10 10:00	148	97	DOD vascular
66711	CT ABDOMEN PELVIS W IV CONTRAST	34	White	F	5/7/14 19:40	76	112	DOD vascular

66713	CT ABDOMEN PELVIS W IV CONTRAST	29	White	F	5/7/14 19:47	101	89	DOD vascular
67032	CT THORAX W IV CONTRAST	46	White	M	1/30/02 10:35	94	105	DOD vascular
67033	CT THORAX W IV CONTRAST	36	White	M	4/8/03 18:47	92	131	DOD vascular
67036	CT THORAX W IV CONTRAST	21	White	M	1/23/09 21:23	98	112	DOD vascular
67037	CT THORAX W IV CONTRAST	20	White	M	8/3/08 19:33	94	105	DOD vascular
67042	CT THORAX W IV CONTRAST	32	White	F	2/11/06 5:45	96	113	DOD vascular
67045	CT ABDOMEN PELVIS W IV CONTRAST	28	White	F	3/23/11 22:28	91	101	DOD vascular
67046	CT OUTSIDE FILM CONSULT CHEST	47	Other	M	8/24/10 23:57	98	117	DOD vascular
67050	CT ANGIO CHEST WO AND W CONTRAST	24	White	M	8/21/11 4:36	91	118	DOD vascular
67053	CT ABDOMEN W IV CONTRAST	24	White	M	7/29/06 4:00	98	151	DOD vascular
67734	CT PELVIS W IV CONTRAST	31	White	M	1/23/14 17:59	174	82	DOD vascular
67775	CT ABDOMEN PELVIS W IV CONTRAST	36	Black	F	5/6/14 0:17	110	86	DOD vascular
68606	CT ABDOMEN PELVIS W IV CONTRAST	20	White	F	8/5/14 1:54	82	54	DOD vascular
68795	CT THORAX W IV CONTRAST	35	White	M	9/9/09 2:05	181	66	DOD vascular
68796	CT THORAX W IV CONTRAST	31	White	M	3/20/08 14:51	133	84	DOD vascular
68797	CT THORAX W IV CONTRAST	36	White	M	9/22/08 8:48	149	100	DOD vascular
68799	CT THORAX W IV CONTRAST	36	White	M	12/31/07 12:27	186	68	DOD vascular
68800	CT THORAX W IV CONTRAST	45	White	F	6/6/10 7:57	145	80	DOD vascular
68802	CT THORAX W IV CONTRAST	41	White	M	12/14/10 10:53	159	95	DOD vascular
68803	CT THORAX W IV CONTRAST	19	White	M	11/1/10 1:28	143	96	DOD vascular
68804	CT THORAX W IV CONTRAST	19	White	M	10/2/10 13:41	144	84	DOD vascular
68806	CT THORAX W IV CONTRAST	18	White	M	4/15/12 16:58	159	86	DOD vascular
68807	CT THORAX W IV CONTRAST	25	Black	F	2/4/12 5:00	129	94	DOD vascular
68808	CT THORAX W IV CONTRAST	37	White	M	12/4/11 21:59	135	98	DOD vascular
68812	CT ANGIO CHEST WO AND W CONTRAST	23	White	F	7/31/12 19:33	134	76	DOD vascular
68816	CT THORAX W IV CONTRAST	33	White	F	11/16/12 13:33	132	84	DOD vascular
68817	CT THORAX W IV CONTRAST	39	White	M	1/17/13 8:52	203	82	DOD vascular
68875	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	28	Black	F	6/2/14 2:19	52	93	DOD vascular
69414	CT ABDOMEN PELVIS W IV CONTRAST	47	White	F	8/5/14 12:21	128	69	DOD vascular
69967	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV	46	White	M	7/7/14 22:53	158	81	DOD vascular
70128	CT OUTSIDE FILM CONSULT CONTRAST	36	White	M	8/7/14 17:40	148	87	DOD vascular
70340	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	33	White	M	9/27/14 1:07	102	125	DOD vascular
71347	CT THORAX W IV CONTRAST	42	White	M	3/13/13 18:27	173	56	DOD vascular
71694	CT OUTSIDE FILM CONSULT CHEST	32	White	M	8/16/14 6:13	114	11	DOD vascular
71932	CT THORAX W IV CONTRAST	28	White	M	7/25/06 20:01	145	88	DOD vascular
71933	CT THORAX W IV CONTRAST	21	White	F	8/12/06 16:45	131	65	DOD vascular
71934	CT THORAX W IV CONTRAST	19	White	M	6/10/06 12:14	146	50	DOD vascular
71937	CT THORAX W IV CONTRAST	50	White	M	6/30/06 22:49	133	72	DOD vascular

71939	CT THORAX W IV CONTRAST	32	White	M	8/6/06 15:49	125	70	DOD vascular
71940	CT THORAX W IV CONTRAST CT ABDOMEN W IV	22	White	M	9/22/05 4:55	197	95	DOD vascular
71941	CONTRAST	37	White	M	7/20/06 11:08	144	72	DOD vascular
71943	CT THORAX W IV CONTRAST	49	White	M	6/18/06 15:24	154	74	DOD vascular
71948	CT THORAX W IV CONTRAST CT ABDOMEN W IV	26	Black	M	10/29/05 3:56	193	86	DOD vascular
71949	CONTRAST	29	White	M	9/14/05 13:34	154	90	DOD vascular
71952	CT THORAX W IV CONTRAST	30	White	M	8/3/06 17:24	152	67	DOD vascular
71954	CT THORAX W IV CONTRAST	21	Black	M	10/28/11 23:50	129	85	DOD vascular
71956	CT THORAX W IV CONTRAST	33	White	F	7/20/06 11:08	131	80	DOD vascular
71957	CT THORAX W IV CONTRAST	22	White	M	7/11/05 5:47	152	68	DOD vascular
71958	CT THORAX W IV CONTRAST	47	Other	M	5/10/07 7:37	152	87	DOD vascular
71964	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	25	White	M	6/10/06 18:01	169	81	DOD vascular
71966	ABDOMEN	22	Black	M	3/11/10 2:39	159	64	DOD vascular
71971	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	43	White	M	8/25/05 17:57	142	83	DOD vascular
72468	CONTRAST CT ABDOMEN W IV	37	White	F	11/27/14 23:25	125	80	DOD vascular
72576	CONTRAST CT ABDOMEN W IV	47	White	M	10/21/06 9:15	134	62	DOD vascular
72583	CONTRAST CT ABDOMEN PELVIS W IV	31	White	M	7/29/06 19:45	142	95	DOD vascular
72584	CONTRAST CT OUTSIDE FILM CONSULT	34	White	M	9/30/12 20:52	145	96	DOD vascular
72586	ABDOMEN CT ABDOMEN W IV	47	Black	F	8/6/07 15:38	159	64	DOD vascular
72587	CONTRAST CT ABDOMEN PELVIS W IV	46	Black	M	7/29/06 18:50	137	90	DOD vascular
72591	CONTRAST CT ABDOMEN W IV	24	Asian	M	4/19/12 2:09	120	96	DOD vascular
72592	CONTRAST CT OUTSIDE FILM CONSULT	27	Black	M	2/7/05 5:29	148	83	DOD vascular
72595	CHEST CT OUTSIDE FILM CONSULT	18	Black	M	10/29/08 19:24	153	95	DOD vascular
72604	CHEST	48	White	M	3/21/06 14:30	155	70	DOD vascular
72652	CT THORAX W IV CONTRAST CT RUNOFF NONVASCULAR	42	White	M	1/4/15 14:45	141	83	DOD vascular
73723	ELEMENTS	30	White	M	9/24/14 18:37	131	93	DOD vascular
73724	CT POST PROCESSED L SPINE	25	Black	M	9/24/13 21:02	204	108	DOD vascular
73725	CT THORAX W IV CONTRAST	24	White	M	6/4/13 8:45	118	55	DOD vascular
73726	CT THORAX W IV CONTRAST	32	White	M	7/6/13 17:06	161	112	DOD vascular
73727	CT POST PROCESSED T SPINE	27	White	F	6/23/13 20:07	136	96	DOD vascular
73728	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV	20	White	F	9/23/13 22:33	135	92	DOD vascular
73729	CONTRAST	26	White	M	10/7/13 1:42	130	145	DOD vascular
73730	CT THORAX W IV CONTRAST	28	White	M	7/13/13 2:15	136	75	DOD vascular
73738	CT THORAX W IV CONTRAST	34	White	M	7/2/13 22:24	130	123	DOD vascular
73740	CT POST PROCESSED L SPINE	49	White	M	6/5/13 12:19	105	66	DOD vascular
73741	CT POST PROCESSED L SPINE	20	White	F	10/8/13 21:25	138	112	DOD vascular
73742	CT POST PROCESSED L SPINE	23	White	M	6/16/13 21:21	174	107	DOD vascular



73743	CT OUTSIDE FILM CONSULT CHEST	35	White	M	8/23/14 20:22	145	80	DOD vascular
73744	CT POST PROCESSED T SPINE	30	White	M	7/14/13 20:07	139	113	DOD vascular
73745	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV	25	White	F	7/3/14 3:36	117	92	DOD vascular
73746	CONTRAST	18	White	M	7/26/13 16:22	171	98	DOD vascular
73748	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	36	White	M	12/2/13 21:50	131	96	DOD vascular
73750	CHEST	23	White	M	9/8/14 2:15	107	116	DOD vascular
73751	CT OUTSIDE FILM CONSULT CHEST	36	White	F	8/31/13 17:38	129	53	DOD vascular
73753	CT POST PROCESSED T SPINE	47	White	M	5/29/14 19:47	146	134	DOD vascular
73754	CT THORAX W IV CONTRAST	49	White	M	12/2/13 8:54	119	94	DOD vascular
73755	CT POST PROCESSED L SPINE	46	White	M	7/7/14 22:53	158	81	DOD vascular
73758	CT POST PROCESSED T SPINE	41	White	M	9/4/13 17:14	124	102	DOD vascular
73759	CT THORAX W IV CONTRAST	42	White	F	12/6/14 4:12	155	85	DOD vascular
73760	CT THORAX W IV CONTRAST	48	White	M	9/8/13 14:21	100	90	DOD vascular
73761	CT THORAX W IV CONTRAST	35	White	M	1/29/15 11:06	124	70	DOD vascular
73762	CT POST PROCESSED T SPINE	20	White	M	6/4/13 12:59	119	107	DOD vascular
73763	CT THORAX W IV CONTRAST	28	White	M	7/26/13 16:41	172	118	DOD vascular
73764	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV	20	Black	M	10/13/13 10:40	195	125	DOD vascular
73765	CONTRAST	47	White	M	2/27/15 20:53	121	64	DOD vascular
73767	CT THORAX W IV CONTRAST	27	White	M	7/8/14 19:17	127	81	DOD vascular
73768	CT POST PROCESSED L SPINE	35	White	M	10/8/13 10:37	144	100	DOD vascular
73769	CT POST PROCESSED T SPINE	26	Black	M	11/19/14 11:41	162	76	DOD vascular
73771	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	19	White	F	7/16/13 21:29	131	114	DOD vascular
73772	CONTRAST	44	White	F	5/31/14 14:03	120	93	DOD vascular
73773	CT POST PROCESSED L SPINE	27	White	F	11/16/14 19:28	191	106	DOD vascular
73775	CT POST PROCESSED T SPINE	26	White	M	6/4/13 18:32	127	74	DOD vascular
73776	CT THORAX W IV CONTRAST	27	White	M	12/25/14 4:45	76	95	DOD vascular
73777	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV	21	White	M	10/31/14 16:44	134	102	DOD vascular
73778	CONTRAST	43	White	M	2/13/15 8:39	128	107	DOD vascular
73779	CT POST PROCESSED L SPINE	43	White	M	11/14/13 12:11	132	72	DOD vascular
73780	CT POST PROCESSED L SPINE	28	White	F	1/19/15 1:40	135	120	DOD vascular
73781	CT POST PROCESSED T SPINE	22	White	F	1/22/15 21:35	141	128	DOD vascular
73782	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	18	White	F	6/28/14 23:01	133	114	DOD vascular
73783	CONTRAST	24	White	M	12/26/14 8:28	96	66	DOD vascular
73785	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV	31	Black	F	10/7/13 19:25	102	62	DOD vascular
73786	CONTRAST	37	White	M	3/11/15 13:56	117	100	DOD vascular
73787	CT POST PROCESSED T SPINE	46	White	F	2/13/15 18:24	139	70	DOD vascular
73788	CT THORAX W IV CONTRAST	44	White	M	5/26/14 12:07	107	102	DOD vascular
73791	CT POST PROCESSED L SPINE	32	Black	F	6/17/14 19:12	140	97	DOD vascular
73792	CT POST PROCESSED T SPINE	40	White	M	9/21/13 17:41	144	99	DOD vascular
73795	CT THORAX W IV CONTRAST	49	White	M	10/11/13 19:00	169	95	DOD vascular
73796	CT THORAX W IV CONTRAST	49	Other	M	9/20/14 18:08	122	45	DOD vascular

73797	CT ABDOMEN PELVIS W IV CONTRAST	19	White	M	7/27/13 22:38	124	124	DOD vascular
73798	CT POST PROCESSED T SPINE	48	Asian	M	8/2/13 11:19	116	77	DOD vascular
73800	CT THORAX W IV CONTRAST	30	Black	M	9/7/14 11:17	142	88	DOD vascular
73801	CT POST PROCESSED L SPINE	19	White	M	7/15/13 21:54	135	85	DOD vascular
73802	CT THORAX W IV CONTRAST	38	White	F	3/14/15 16:13	137	76	DOD vascular
73803	CT THORAX W IV CONTRAST	28	White	F	9/25/14 9:50	121	71	DOD vascular
73806	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV CONTRAST	21	White	F	7/5/13 18:01	118	88	DOD vascular
73807	CT THORAX W IV CONTRAST	18	White	M	8/7/14 9:59	109	140	DOD vascular
73809	CT THORAX W IV CONTRAST	20	White	F	10/6/13 2:19	123	78	DOD vascular
73810	CT THORAX W IV CONTRAST	20	White	M	9/1/13 20:31	160	107	DOD vascular
73811	CT THORAX W IV CONTRAST	19	White	F	8/23/14 13:18	118	70	DOD vascular
73812	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	47	White	M	6/27/14 12:35	156	94	DOD vascular
73813	CT POST PROCESSED L SPINE	28	White	F	9/2/14 9:36	131	82	DOD vascular
73815	CT THORAX W IV CONTRAST	44	White	F	5/22/13 11:29	138	81	DOD vascular
73816	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV CONTRAST	30	White	M	9/5/14 18:06	135	92	DOD vascular
73817	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV CONTRAST	28	White	M	6/15/13 3:32	148	75	DOD vascular
73818	CT POST PROCESSED L SPINE	27	White	M	6/29/13 2:16	117	86	DOD vascular
73821	CT POST PROCESSED L SPINE CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	50	White	M	4/14/14 18:02	138	94	DOD vascular
73822	CT THORAX W IV CONTRAST	32	White	M	7/14/13 0:20	149	89	DOD vascular
73823	CT THORAX W IV CONTRAST	36	White	M	6/11/13 23:23	120	76	DOD vascular
73824	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	38	White	M	8/16/13 23:07	163	120	DOD vascular
73825	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	45	White	M	10/11/14 4:45	141	96	DOD vascular
73826	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	48	White	M	6/6/14 5:56	140	92	DOD vascular
73827	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV CONTRAST	46	White	M	11/8/13 16:51	114	83	DOD vascular
73828	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV CONTRAST	45	White	M	7/20/14 11:53	183	55	DOD vascular
73830	CT THORAX W IV CONTRAST	45	White	F	10/21/13 10:17	122	97	DOD vascular
73831	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV CONTRAST	50	White	M	10/22/14 9:16	143	74	DOD vascular
73832	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV CONTRAST	45	Black	M	3/26/15 7:55	130	78	DOD vascular
73834	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	48	White	F	8/30/13 21:25	186	92	DOD vascular
73835	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	40	White	M	8/14/14 11:19	112	123	DOD vascular
73836	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	40	White	F	3/24/15 16:33	122	108	DOD vascular
73837	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV CONTRAST	44	White	M	11/21/14 20:19	148	104	DOD vascular
73838	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV CONTRAST	49	White	M	6/6/14 15:49	131	77	DOD vascular
73839	CT POST PROCESSED T SPINE CT OUTSIDE FILM CONSULT CHEST	43	White	M	1/10/14 14:25	109	79	DOD vascular
73840	CT THORAX W IV CONTRAST	39	Black	M	6/3/14 22:32	141	86	DOD vascular
73842	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV CONTRAST	43	White	M	8/22/14 15:40	144	59	DOD vascular
73851	CT THORAX W IV CONTRAST	24	White	M	2/18/14 10:06	140	96	DOD vascular

73880	CT ARCHIVE ONLY CHEST ABDOMEN PELVIS	43	White	M	2/19/13 0:00	126	104	DOD vascular
73881	CT ABDOMEN PELVIS W IV CONTRAST	35	White	F	6/17/13 13:37	114	81	DOD vascular
73882	CT POST PROCESSED T SPINE	42	Black	M	6/26/13 16:08	150	69	DOD vascular
73884	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV	30	White	M	9/27/14 18:01	157	93	DOD vascular
73885	CONTRAST	27	White	M	1/25/14 10:39	152	85	DOD vascular
73887	CT ARCHIVE ONLY ABDOMEN	29	White	M	7/3/13 12:45	100	115	DOD vascular
73888	CT POST PROCESSED T SPINE	21	Other	M	6/22/13 20:42	154	103	DOD vascular
73889	CT THORAX W IV CONTRAST	23	White	F	9/13/14 13:18	101	63	DOD vascular
73890	CT POST PROCESSED T SPINE	32	White	M	12/28/13 19:58	99	47	DOD vascular
73891	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	18	White	M	7/5/13 2:58	137	79	DOD vascular
73892	CONTRAST	26	White	M	12/16/14 16:39	162	100	DOD vascular
73893	CT THORAX W IV CONTRAST	50	Black	M	7/24/13 11:57	158	82	DOD vascular
73894	CT POST PROCESSED T SPINE	23	White	M	11/1/14 15:22	123	102	DOD vascular
73895	CT THORAX W IV CONTRAST	32	Black	M	1/18/14 4:38	162	114	DOD vascular
73896	CT THORAX W IV CONTRAST	21	Asian	F	12/20/14 2:49	101	100	DOD vascular
73897	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	41	White	M	6/2/13 15:04	121	157	DOD vascular
73900	CONTRAST	31	White	F	12/5/13 19:10	98	74	DOD vascular
73901	CT THORAX W IV CONTRAST	31	Black	M	1/25/13 20:51	152	77	DOD vascular
73902	CT THORAX W IV CONTRAST	50	White	F	7/4/13 22:00	146	92	DOD vascular
73903	CT POST PROCESSED T SPINE	28	White	M	6/7/13 20:08	138	54	DOD vascular
73904	CT POST PROCESSED L SPINE	22	White	M	6/17/13 13:23	112	118	DOD vascular
73905	CT POST PROCESSED L SPINE	31	White	M	12/14/13 12:09	186	112	DOD vascular
73907	CT THORAX W IV CONTRAST	43	White	F	1/18/13 16:34	100	55	DOD vascular
73909	CT PELVIS WO IV CONTRAST	31	White	M	7/29/13 19:56	132	110	DOD vascular
73910	CT THORAX W IV CONTRAST	23	White	F	6/26/13 14:33	147	127	DOD vascular
73911	CT POST PROCESSED T SPINE	25	White	F	12/3/14 15:48	90	96	DOD vascular
73912	CT POST PROCESSED T SPINE	28	White	F	1/25/14 10:39	117	83	DOD vascular
73913	CT POST PROCESSED T SPINE	38	White	M	6/21/14 11:40	152	75	DOD vascular
73914	CT THORAX W IV CONTRAST	20	White	F	8/7/13 9:26	135	100	DOD vascular
73915	CT THORAX W IV CONTRAST	22	Asian	F	7/10/13 2:21	135	75	DOD vascular
73916	CT POST PROCESSED L SPINE	29	White	F	1/18/15 5:47	103	78	DOD vascular
73917	CT THORAX W IV CONTRAST	23	White	M	7/18/14 2:59	123	83	DOD vascular
73918	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	30	White	F	12/9/13 1:05	127	126	DOD vascular
73919	CHEST	38	White	F	1/27/14 23:37	118	96	DOD vascular
73920	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS WO IV	20	White	M	2/8/14 2:19	158	103	DOD vascular
73921	CONTRAST	48	White	F	10/7/13 18:54	156	85	DOD vascular
73923	CT POST PROCESSED L SPINE	34	Other	M	6/5/14 10:31	136	67	DOD vascular
73924	CT THORAX W IV CONTRAST	41	White	F	10/3/14 9:07	110	70	DOD vascular
73926	CT POST PROCESSED T SPINE	23	White	M	7/16/13 21:37	106	92	DOD vascular
73929	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	23	Other	M	3/18/13 3:18	109	83	DOD vascular
73930	CONTRAST	42	White	M	1/26/15 18:38	69	95	DOD vascular

73931	CT THORAX W IV CONTRAST	28	White	F	3/15/15 10:51	112	128	DOD vascular
73932	CT POST PROCESSED T SPINE	49	White	F	8/27/14 19:26	115	93	DOD vascular
73933	CT POST PROCESSED T SPINE	46	White	M	8/16/14 20:53	140	119	DOD vascular
73934	CT THORAX W IV CONTRAST	28	White	M	7/3/14 20:56	117	75	DOD vascular
73935	CT THORAX W IV CONTRAST	25	White	F	1/6/15 2:07	119	96	DOD vascular
73937	CT THORAX W IV CONTRAST	45	White	M	7/5/13 17:30	104	80	DOD vascular
73938	CT POST PROCESSED T SPINE	21	n Indian	M	1/12/13 3:13	143	89	DOD vascular
73941	CT POST PROCESSED T SPINE	27	White	M	8/3/13 18:26	152	125	DOD vascular
73942	CT POST PROCESSED L SPINE	21	Black	M	6/15/13 1:07	124	94	DOD vascular
73943	CT POST PROCESSED L SPINE	34	White	M	11/1/14 12:48	134	119	DOD vascular
73944	CT THORAX W IV CONTRAST	24	Black	M	4/4/13 22:49	133	24	DOD vascular
73945	CT POST PROCESSED L SPINE	36	White	M	12/23/14 13:28	141	83	DOD vascular
73980	CT POST PROCESSED L SPINE	23	White	F	8/16/13 8:59	148	78	DOD vascular
73981	CT ABDOMEN PELVIS W IV CONTRAST	38	White	F	7/14/13 15:09	134	105	DOD vascular
73982	CT POST PROCESSED T SPINE	29	White	M	7/18/13 4:04	162	106	DOD vascular
73983	CT THORAX W IV CONTRAST	24	White	M	8/20/13 14:31	130	71	DOD vascular
73985	CT ABDOMEN PELVIS W IV CONTRAST	30	White	M	8/24/13 16:29	108	115	DOD vascular
73987	CT THORAX W IV CONTRAST	25	White	M	8/18/13 2:22	157	83	DOD vascular
73988	CT THORAX W IV CONTRAST	47	White	M	9/21/13 14:10	153	70	DOD vascular
73989	CT THORAX W IV CONTRAST	19		M	7/12/13 13:06	141	124	DOD vascular
73990	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	23	White	M	7/26/13 17:34	123	74	DOD vascular
73992	CT THORAX W IV CONTRAST	39	White	F	7/26/13 17:46	132	76	DOD vascular
73994	CT OUTSIDE FILM CONSULT ABDOMEN AND PELVIS	23	White	M	11/21/13 16:32	124	66	DOD vascular
73995	CT THORAX WO IV CONTRAST	36	White	M	11/2/13 6:33	126	72	DOD vascular
73996	CT POST PROCESSED T SPINE	48	White	F	8/21/13 14:17	113	75	DOD vascular
73997	CT POST PROCESSED T SPINE	33	White	M	9/14/13 13:25	157	66	DOD vascular
73998	CT POST PROCESSED T SPINE	20	White	M	9/13/13 14:14	164	70	DOD vascular
74000	CT POST PROCESSED T SPINE	28	Other	M	8/6/13 18:22	154	88	DOD vascular
74001	CT THORAX W IV CONTRAST	29	Black	M	10/9/13 23:09	142	108	DOD vascular
74002	CT OUTSIDE FILM CONSULT CHEST	44	White	M	7/5/14 18:57	127	122	DOD vascular
74004	CT POST PROCESSED T SPINE	48	White	M	8/16/13 19:17	135	83	DOD vascular
74006	CT THORAX W IV CONTRAST	41	Other	M	3/10/14 18:21	127	105	DOD vascular
74007	CT THORAX W IV CONTRAST	45	White	M	6/24/14 16:41	114	70	DOD vascular
74009	CT POST PROCESSED T SPINE	23	White	M	4/6/14 15:55	146	97	DOD vascular
74011	CT THORAX W IV CONTRAST	22	White	M	7/28/13 14:57	114	78	DOD vascular
74012	CT POST PROCESSED L SPINE	22	White	F	2/13/14 21:57	144	97	DOD vascular
74013	CT THORAX W IV CONTRAST	30	White	M	9/11/13 15:57	127	105	DOD vascular
74014	CT POST PROCESSED T SPINE	18	White	M	8/10/13 18:07	100	67	DOD vascular
74016	CT ABDOMEN PELVIS W IV CONTRAST	39	White	M	7/18/14 1:17	150	106	DOD vascular
74017	CT OUTSIDE FILM CONSULT CHEST	25	White	M	2/4/15 23:16	135	68	DOD vascular
74020	CT POST PROCESSED T SPINE	24	White	M	8/16/14 17:15	132	93	DOD vascular

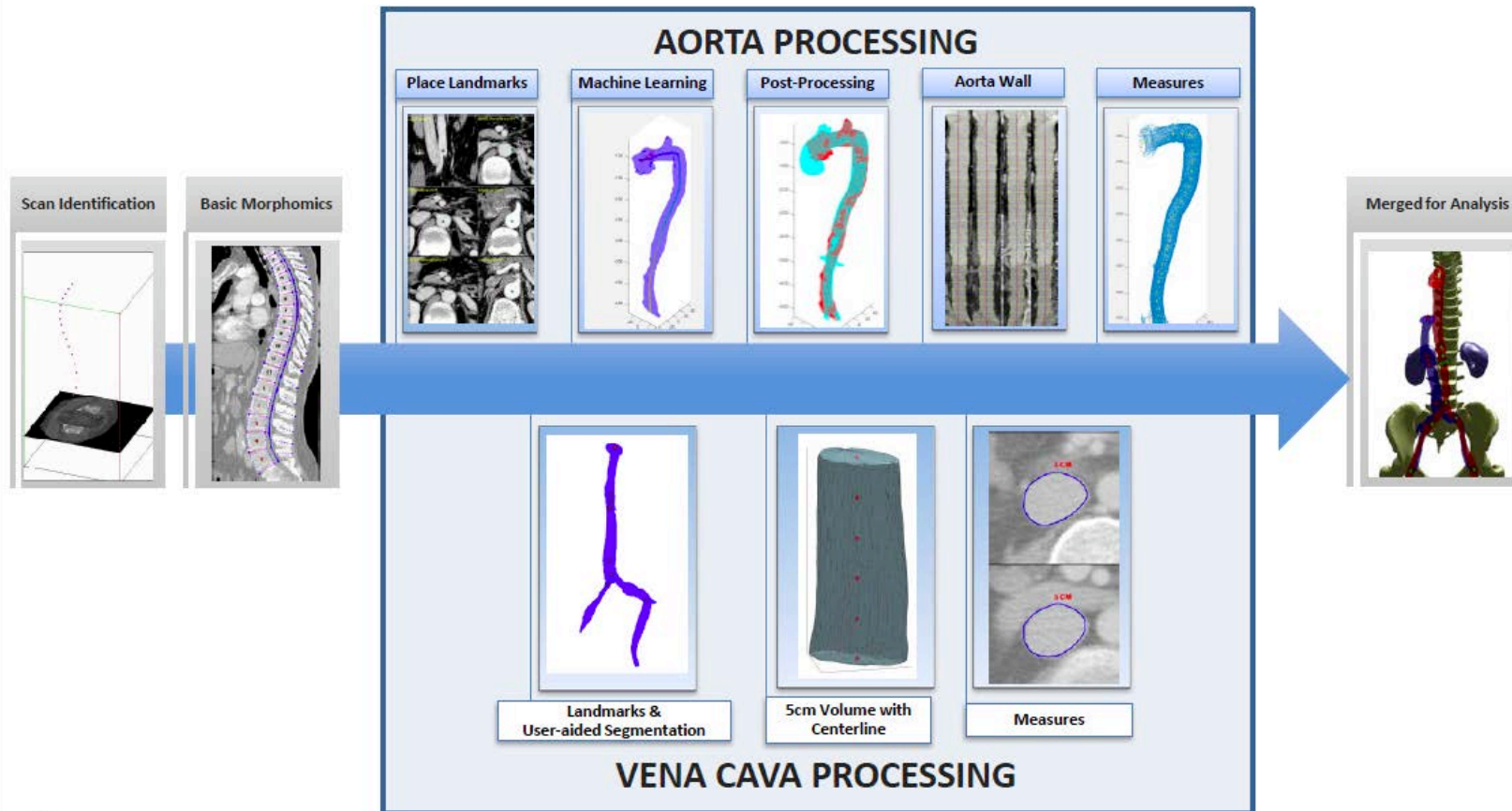
74021	CT POST PROCESSED L SPINE	39	White	M	3/28/15 14:16	150	66	DOD vascular
74022	CT CYSTOGRAPHY S I	22	Asian	F	12/11/14 9:42	131	76	DOD vascular
74023	CT THORAX W IV CONTRAST	42	White	M	9/5/14 20:56	147	84	DOD vascular
74025	CT POST PROCESSED T SPINE	33	White	M	1/28/15 22:29	144	102	DOD vascular
74030	CT POST PROCESSED T SPINE CT OUTSIDE FILM CONSULT	32		M	1/29/15 16:23	114	78	DOD vascular
74032	ABDOMEN AND PELVIS	33	White	M	9/15/14 20:20	154	88	DOD vascular
74033	CT POST PROCESSED T SPINE	19	White	M	1/1/15 5:18	133	76	DOD vascular
74035	CT POST PROCESSED L SPINE	44	White	M	10/13/13 12:38	118	99	DOD vascular
74041	CT THORAX W IV CONTRAST	20	White	M	10/8/13 4:07	167	67	DOD vascular
74049	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	35	White	M	8/10/14 9:43	130	90	DOD vascular
74052	CHEST CT OUTSIDE FILM CONSULT	20	White	M	12/9/14 21:51	104	129	DOD vascular
74056	CHEST	34	White	M	9/6/14 3:41	148	93	DOD vascular
74058	CT POST PROCESSED T SPINE	29	White	F	7/18/14 13:38	136	106	DOD vascular
74061	CT POST PROCESSED T SPINE	30	White	M	8/22/14 3:57	119	92	DOD vascular
74063	CT THORAX W IV CONTRAST	27		M	7/22/14 19:50	127	87	DOD vascular
74077	CT THORAX W IV CONTRAST	44	White	F	2/16/15 22:08	139	82	DOD vascular
74080	CT POST PROCESSED T SPINE	21	White	M	11/1/13 8:27	112	67	DOD vascular
74084	CT POST PROCESSED L SPINE	46	White	F	7/5/14 21:23	116	69	DOD vascular
74091	CT THORAX W IV CONTRAST CT ARCHIVE ONLY CHEST	20	Black	F	5/24/14 8:18	147	89	DOD vascular
74094	ABDOMEN PELVIS	23	White	F	1/2/15 19:33	134	123	DOD vascular
74095	CT PELVIS W IV CONTRAST CT OUTSIDE FILM CONSULT	21	White	M	10/26/13 3:22	160	89	DOD vascular
74097	ABDOMEN AND PELVIS CT ABDOMEN PELVIS W IV	38	White	F	12/25/14 1:56	112	112	DOD vascular
74098	CONTRAST	48	White	F	11/17/13 18:48	87	65	DOD vascular
74099	CT POST PROCESSED T SPINE	48	White	M	4/6/14 10:57	151	90	DOD vascular
74100	CT POST PROCESSED T SPINE	25	White	M	3/30/15 1:18	118	111	DOD vascular
74101	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV	34	White	M	10/11/14 18:30	136	106	DOD vascular
74104	CONTRAST CT OUTSIDE FILM CONSULT	20	Other	F	11/30/14 20:48	157	116	DOD vascular
74107	ABDOMEN AND PELVIS	43		M	9/28/14 20:00	102	92	DOD vascular
74108	CT POST PROCESSED T SPINE CT OUTSIDE FILM CONSULT	20	White	M	12/5/13 15:55	152	127	DOD vascular
74111	CHEST	22	White	M	1/2/15 21:22	118	100	DOD vascular
74114	CT THORAX W IV CONTRAST	20	White	M	3/30/15 21:05	158	114	DOD vascular
74115	CT THORAX W IV CONTRAST	42	White	M	9/5/14 9:44	143	65	DOD vascular
74116	CT POST PROCESSED T SPINE	45	White	M	11/3/14 12:39	116	64	DOD vascular
74118	CT POST PROCESSED T SPINE	29	White	M	11/30/13 20:17	122	120	DOD vascular
74119	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	29	White	M	2/8/14 23:28	142	110	DOD vascular
74120	CONTRAST	49	White	F	12/2/13 15:41	107	73	DOD vascular
74122	CT THORAX W IV CONTRAST	39	Other	F	5/26/14 0:57	155	100	DOD vascular
74125	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	44	White	M	7/20/14 23:05	148	56	DOD vascular
74126	ABDOMEN AND PELVIS	44	White	M	11/16/13 10:33	108	92	DOD vascular
74127	CT ABDOMEN PELVIS W IV	24	White	M	3/16/14 17:04	130	102	DOD vascular

CONTRAST								
74128	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV	40	White	F	8/28/14 17:51	134	87	DOD vascular
74132	CONTRAST	24	White	M	7/11/13 16:16	127	75	DOD vascular
74134	CT POST PROCESSED L SPINE	45	White	M	9/11/14 4:35	133	77	DOD vascular
74135	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	27	White	M	10/13/13 20:39	140	96	DOD vascular
74138	CHEST	19	Black	F	9/27/13 21:01	120	64	DOD vascular
74139	CT POST PROCESSED T SPINE	43	White	M	9/7/14 18:16	137	72	DOD vascular
74140	CT POST PROCESSED T SPINE CT ABDOMEN PELVIS W IV	48	White	M	10/1/13 10:01	145	76	DOD vascular
74143	CONTRAST CT ABDOMEN PELVIS W IV	18	White	F	8/7/13 2:33	100	90	DOD vascular
74145	CONTRAST	20	White	M	5/13/14 14:03	152	77	DOD vascular
74146	CT THORAX W IV CONTRAST	42	White	M	9/8/14 12:32	138	102	DOD vascular
74147	CT POST PROCESSED T SPINE	21	White	M	9/21/13 15:06	119	67	DOD vascular
74149	CT THORAX W IV CONTRAST	48	White	M	8/15/13 3:41	120	67	DOD vascular
74150	CT POST PROCESSED T SPINE	24	White	M	3/18/15 8:51	186	104	DOD vascular
74151	CT THORAX W IV CONTRAST	28	White	M	1/16/15 12:59	145	69	DOD vascular
74152	CT POST PROCESSED L SPINE CT ABDOMEN PELVIS W IV	33	White	F	9/14/13 13:20	135	70	DOD vascular
74154	CONTRAST	27	White	F	2/18/15 11:23	132	119	DOD vascular
74155	CT THORAX W IV CONTRAST CT OUTSIDE FILM CONSULT	32	White	F	9/21/13 14:35	123	64	DOD vascular
74156	ABDOMEN AND PELVIS	34	White	M	3/4/15 18:35	139	146	DOD vascular
74157	CT THORAX W IV CONTRAST CT ABDOMEN PELVIS W IV	26		M	5/25/14 20:32	98	96	DOD vascular
74159	CONTRAST	50	Asian	M	9/6/14 12:35	153	85	DOD vascular
74431	CT THORAX W IV CONTRAST	23	White	M	4/22/13 14:34	139	122	DOD vascular

# APPENDIX B

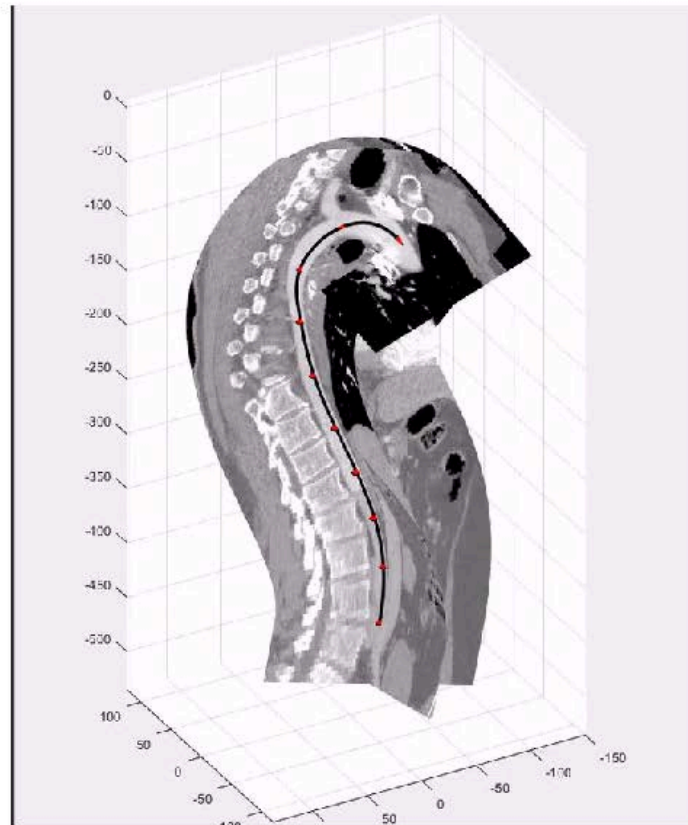
## Vascular Processing

# Vascular Processing Methodology





# Aorta Centerline



Press arrow to play animation

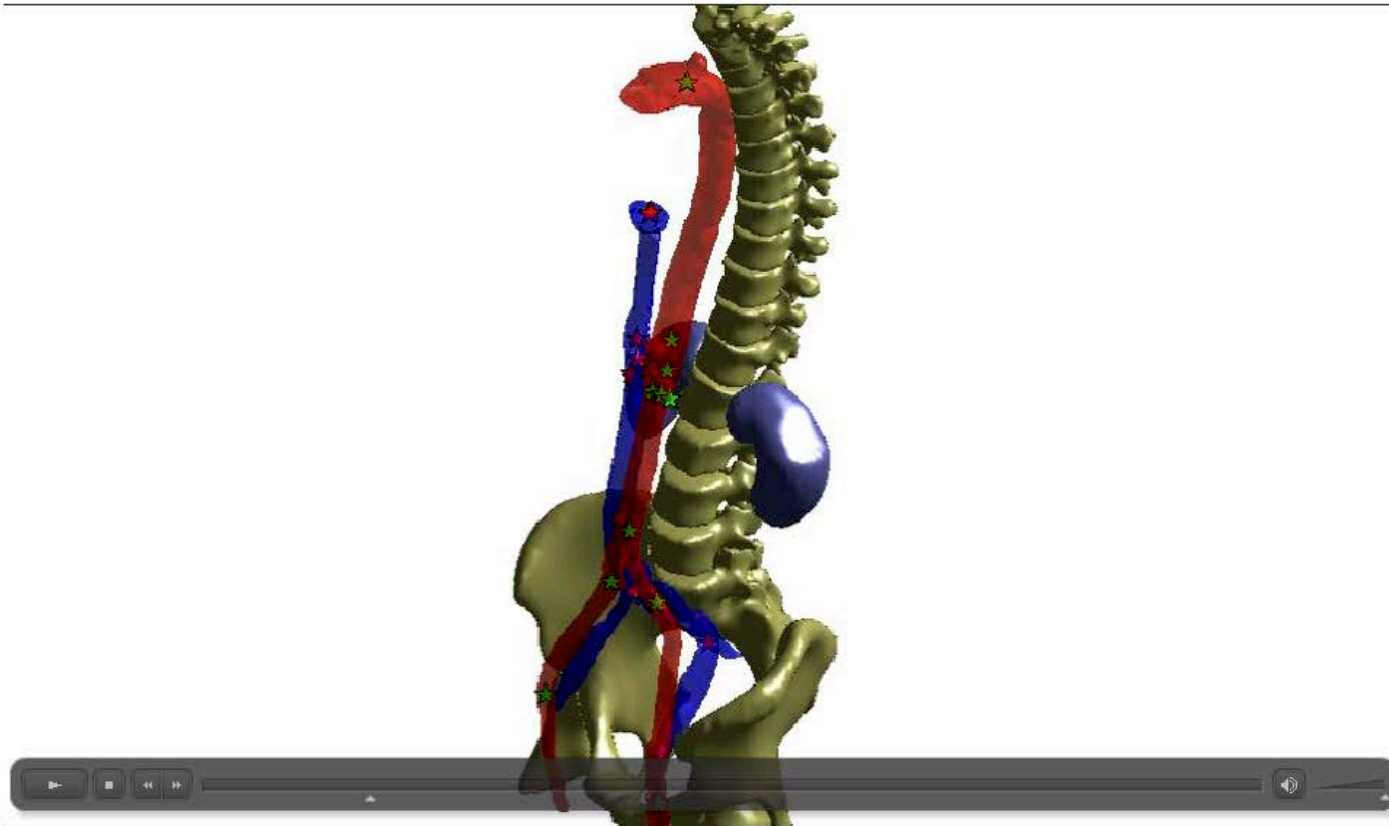


University of Michigan

**MAG**

**Morphomic  
Analysis Group**

## Segmented Aorta and Vena Cava in situ



Press arrow to play animation



University of Michigan

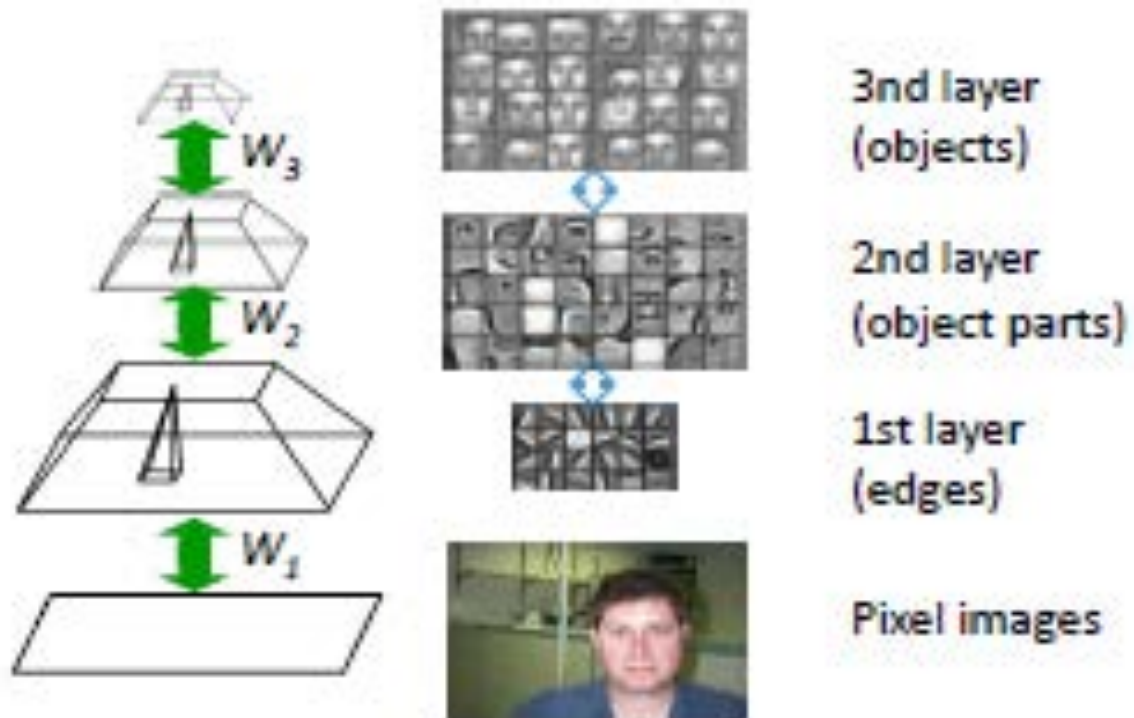
**MAG**

**Morphomic  
Analysis Group**

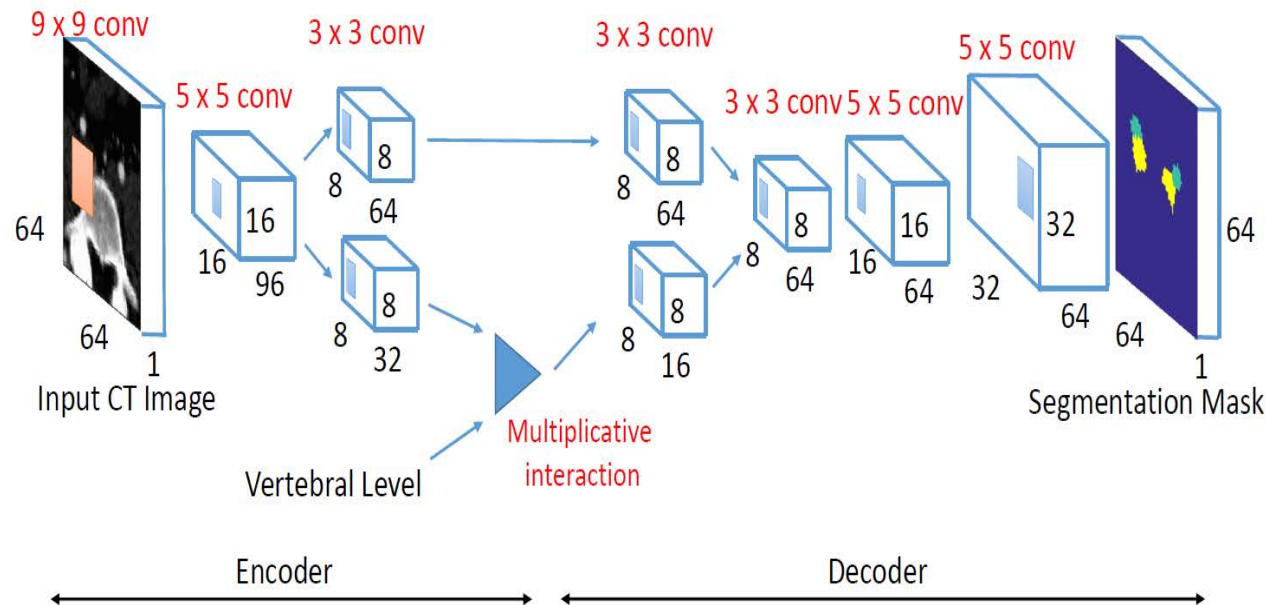
# APPENDIX C

## Machine Learning

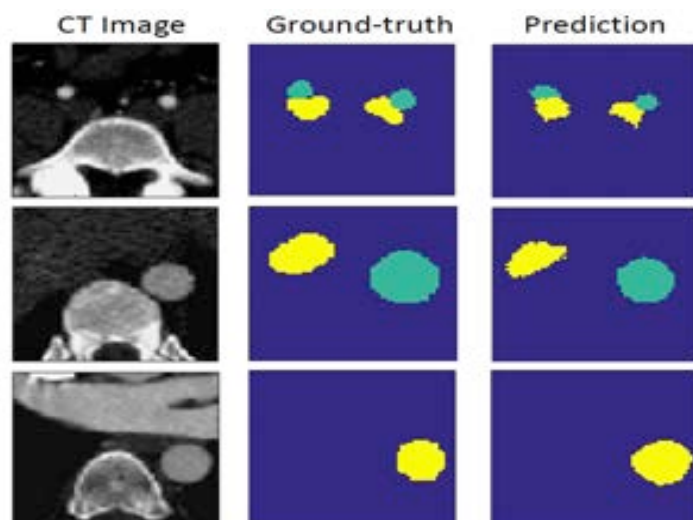
# Facial Recognition



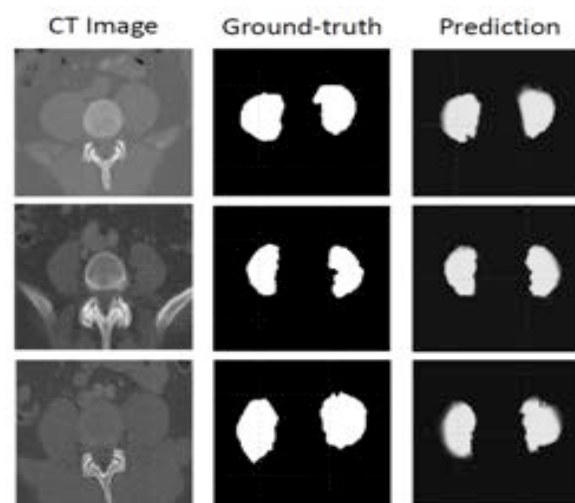
# Analytic morphomics convolutional neural networks (CNN)



## Machine Learning Results



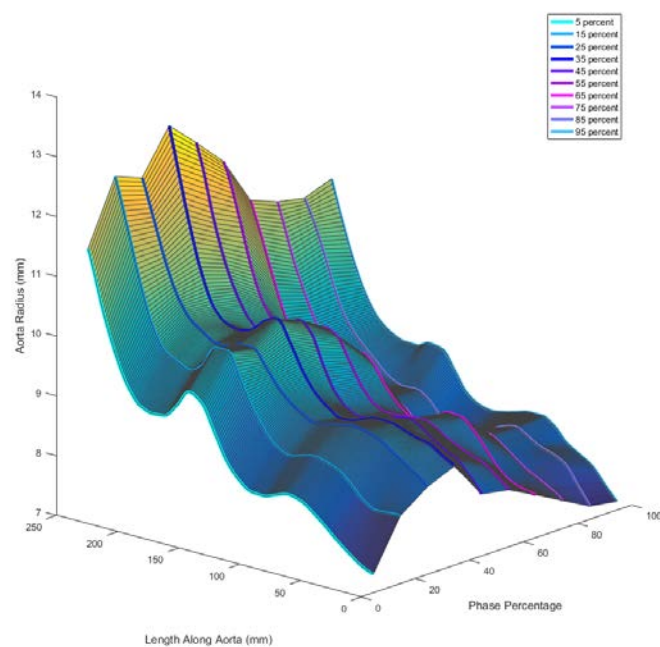
Aorta and Vena Cava



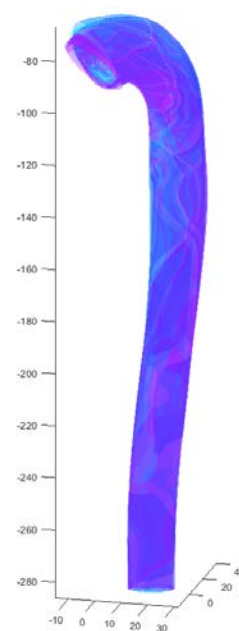
Psoas

# APPENDIX D

## Appendix D: Phase Overlay & Gated Radius Graph



Phase overlay - All 10 Aorta volumes from different phases overlaid on top of one another



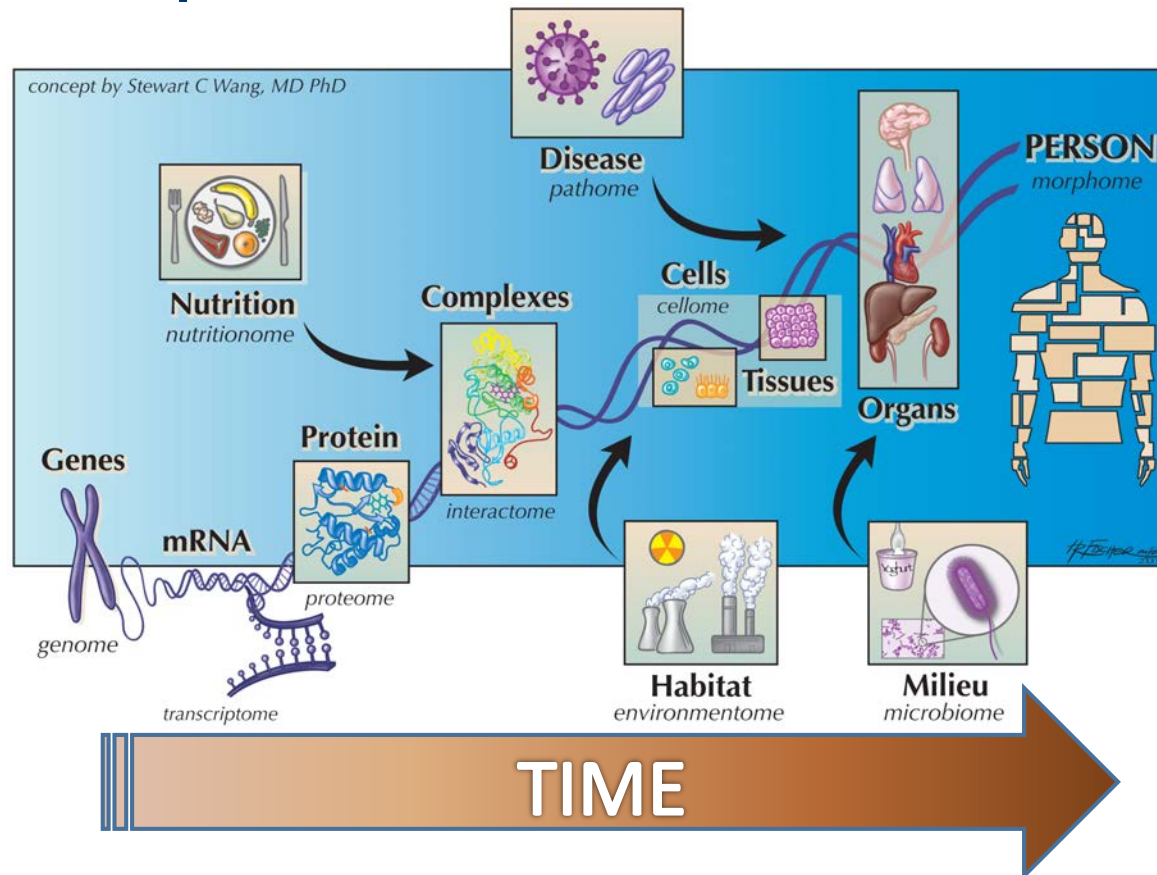
Gated Radius Graph – Aortic Radius as a function of length along the aorta and cardiac phase.



# **APPENDIX E**

## **Morphomics Overview**

# Morphomics = Personalized Medicine

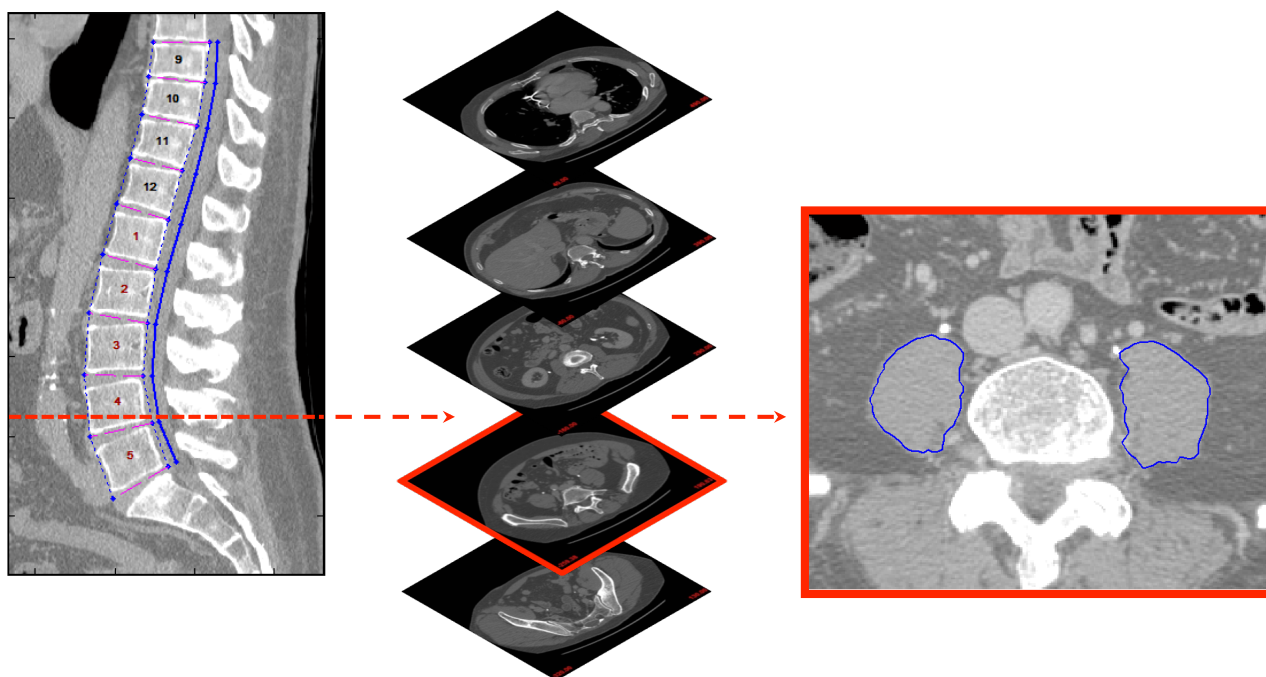


---

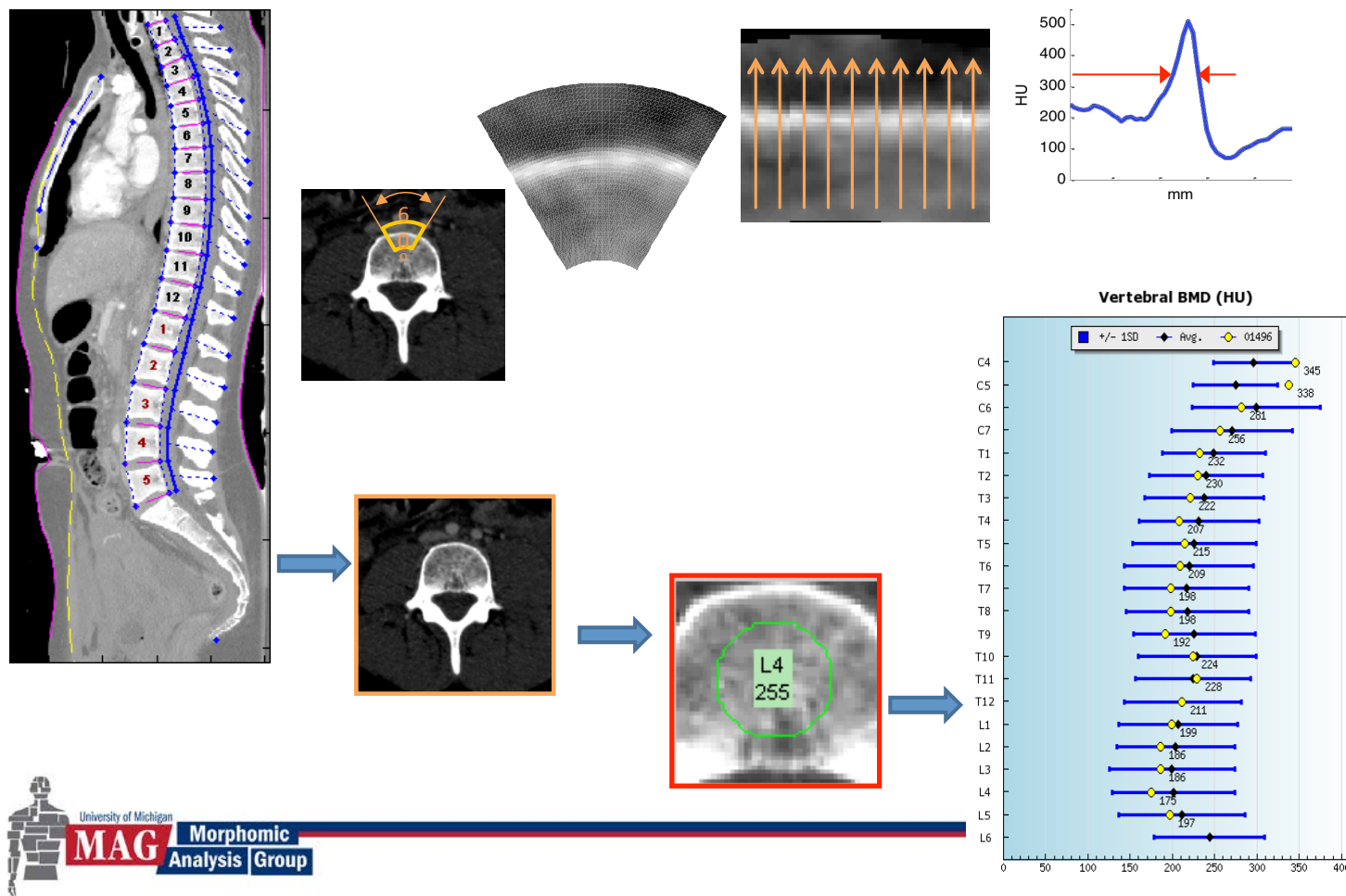
## Morphomics = Personalized Medicine

- **Multiplex** tool for patient diagnosis and stratification.
- Morphomics is based on highly-automated, high-throughput image processing to quantify millions of anatomically-indexed measures from a single patient's scan, offering remarkable opportunities for personalized treatment and surgical planning.
- Imaging data has been preserved in pristine condition (**BUT NOT USED**) while patients' response to treatment has been observed. .. Natural experiments
- Each patient's individual morphometric qualities are then assessed against population-based standards to identify patient-specific risk factors
- Morphomic assessment of trunk musculature (density and mass), body composition (fat distribution), vascular calcification, and solid organ morphomic measures have demonstrated that these patient-specific variables dominate risk prediction models and provide critical insight into patient risk. Thousands of other potential biomarkers are being tested.

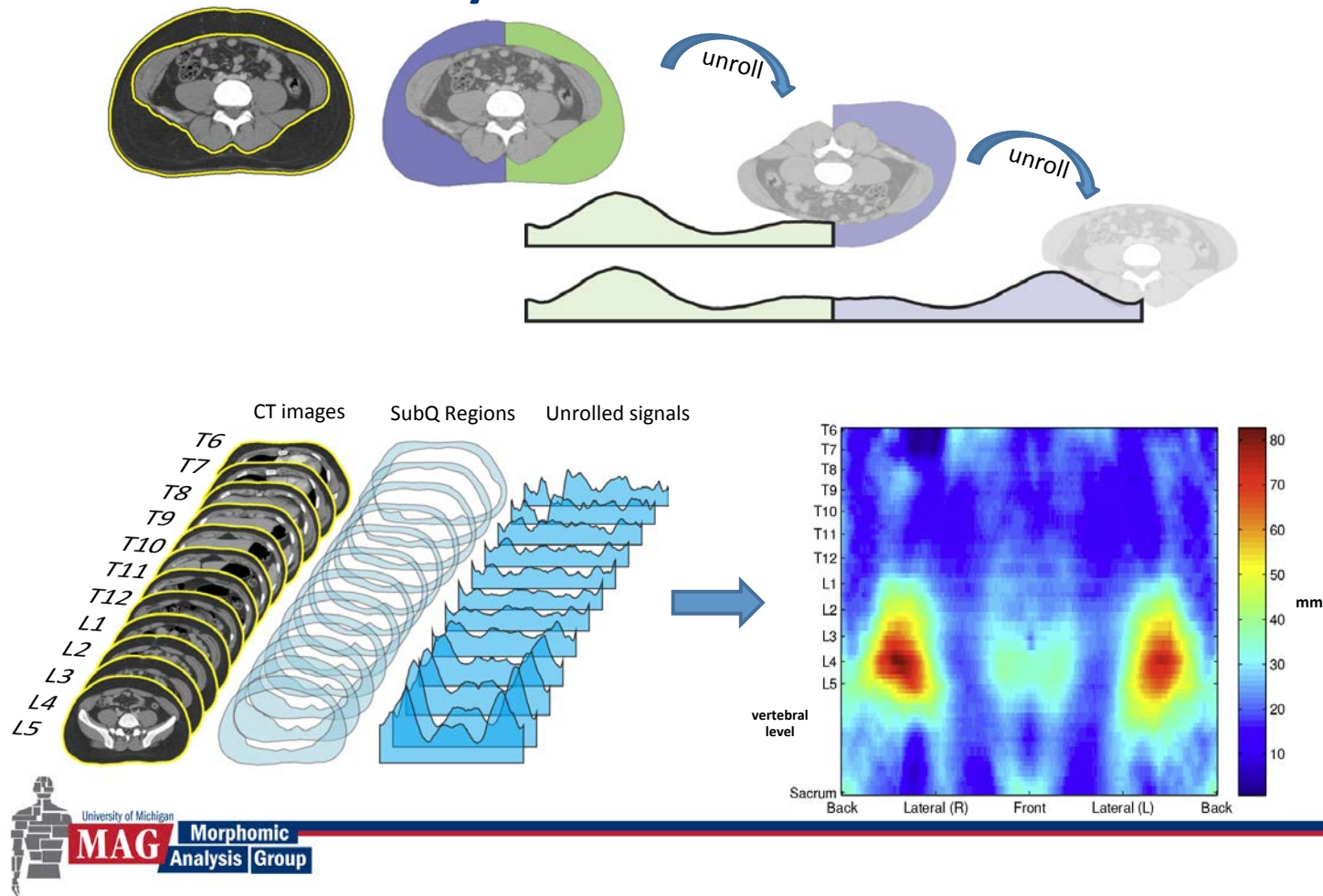
## Muscle Health/Sarcopenia



# Bone Health



## Obesity – Fat Characterization



# APPENDIX F

## Initial Data Analysis

**Initial Statistical Analysis : Morphomic Analysis Group**

BRIAN A. DERSTINE \*<sup>1</sup>

<sup>1</sup> *Department of Surgery, University of Michigan*

Dated: Monday 28<sup>th</sup> March, 2016

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## 1 Note

The analysis described in the following text is a follow-up to the study described in: Stannard et al. J Trauma Acute Care Surg, Volume 75, Number 2, Supplement 2. The following text has been updated from that paper to include our reported results and table.

## 2 Patients and Methods

Following institutional review board approval (HUM00041441), trauma patients who underwent CT scanning were retrospectively identified from the University of Michigan radiology database. For inclusion, CT scans were those performed on male or female patients between the ages of 18 years and 50 years, inclusive. All CT scans were (contrast-enhanced, N-slice...) continuous examinations of the chest, abdomen, pelvis, and femoral vessels.

The individual scans were loaded on to laptop running Matlab 2015a software (The MathWorks Inc., Natick, Massachusetts).

Custom high-throughput image processing algorithms permitted the measurement (in millimeters) of the distance between vessel origins and radii (insert figures). The aorta was divided into and examined as three previously described zones (figure). (cite) Aortic Zone I extended from the origin of the left subclavian artery to the celiac trunk. Aortic Zone II extended from the celiac trunk to the origin of the lowest renal artery, and the infrarenal aorta (lowest renal to the aortic bifurcation) constituted the aortic Zone III.

The center line length (mm) of each zone was measured, and the luminal diameter of the aorta at each 5% point between the proximal and distal most extent of each of the zones was recorded. In addition, the distance from left and right common femoral artery (CFA) at the midpoint of the femoral head to the aortic bifurcation (AB) and the origin of the left subclavian artery was recorded. The CFA landmark was chosen as a plausible site for arterial access. For the purposes of the study, the external measure of torso extent was defined as the straight line distance (mm) from the suprasternal notch of the manubrium to the midpubic symphysis (s2pdist), parallel to the patients craniocaudal axis.

CT images were examined by one or more of three separate readers. Data were collected in a PostgreSQL database (cite) and imported to R version 3.2.3 (R Foundation for Statistical Computing, Vienna, Austria) for analysis. Distances and diameters were reported as medians, accompanied by interquartile range (IQR) and maximum-minimum values, along with boxplots to describe their distribution. Scatter plots were generated plotting aortic zone length against torso extent, and a best-fit line was drawn using linear regression analysis. The coefficient of determination  $R^2$  was reported as measures of the strength of the linear association.

## 3 Results

2,247 patients underwent CT imaging following traumatic injury between 2000-06-11 07:03:22 and 2015-03-30 21:46:04. There were 478 exclusions (21.2728082%) due to incomplete chest, abdomen, pelvis, and femoral imaging. The final cohort was composed of 1769 patients with a mean (SD) age of 32.7401631 (10.2341854) and a median (IQR) torso extent of 557.4135 mm (537-579 mm). There were 1270 (71.7919729%) male patients and 75 (4.2396834%) patients identified as hypotensive. For the purposes of the study, hypotensive was defined as blood pressure less than 100 and pulse over 100 at the time of emergency department trauma admission.

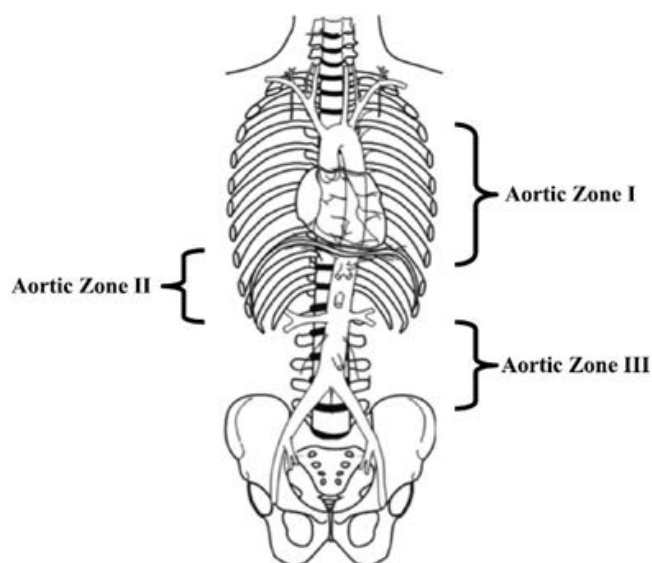
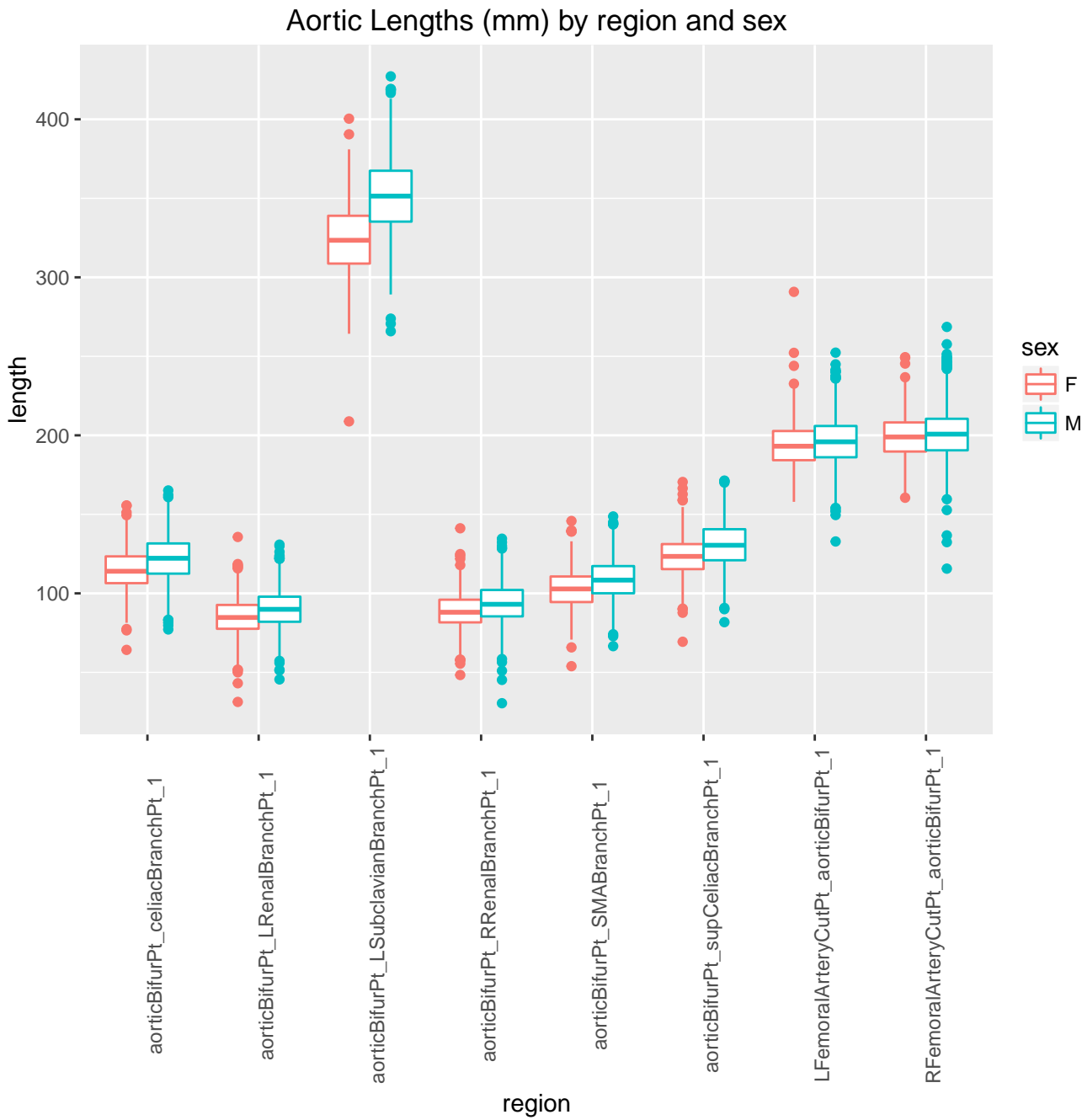
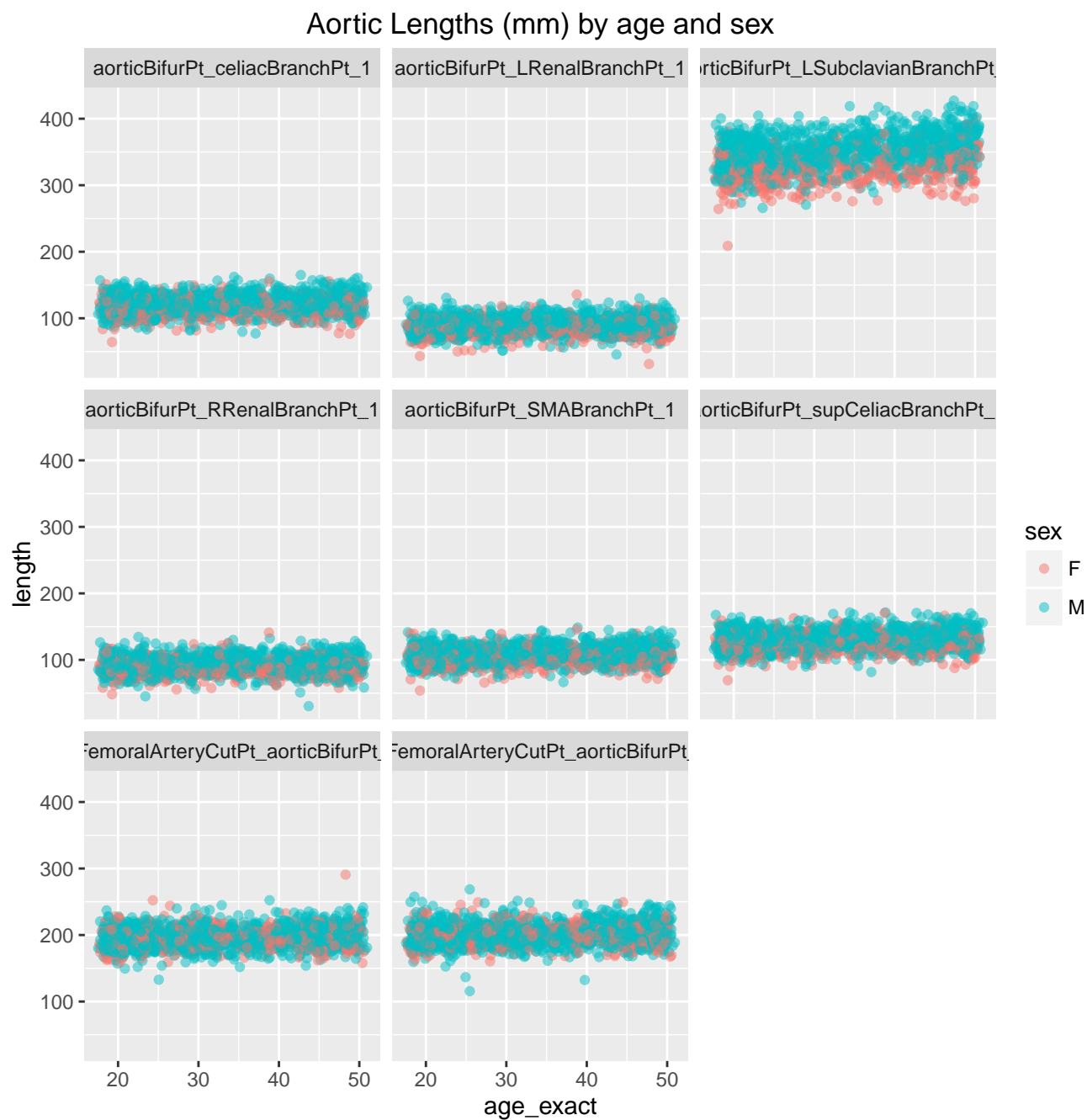


Figure 2. Line drawing demonstrating the three aortic zones.

### 3.1 Distances or Lengths

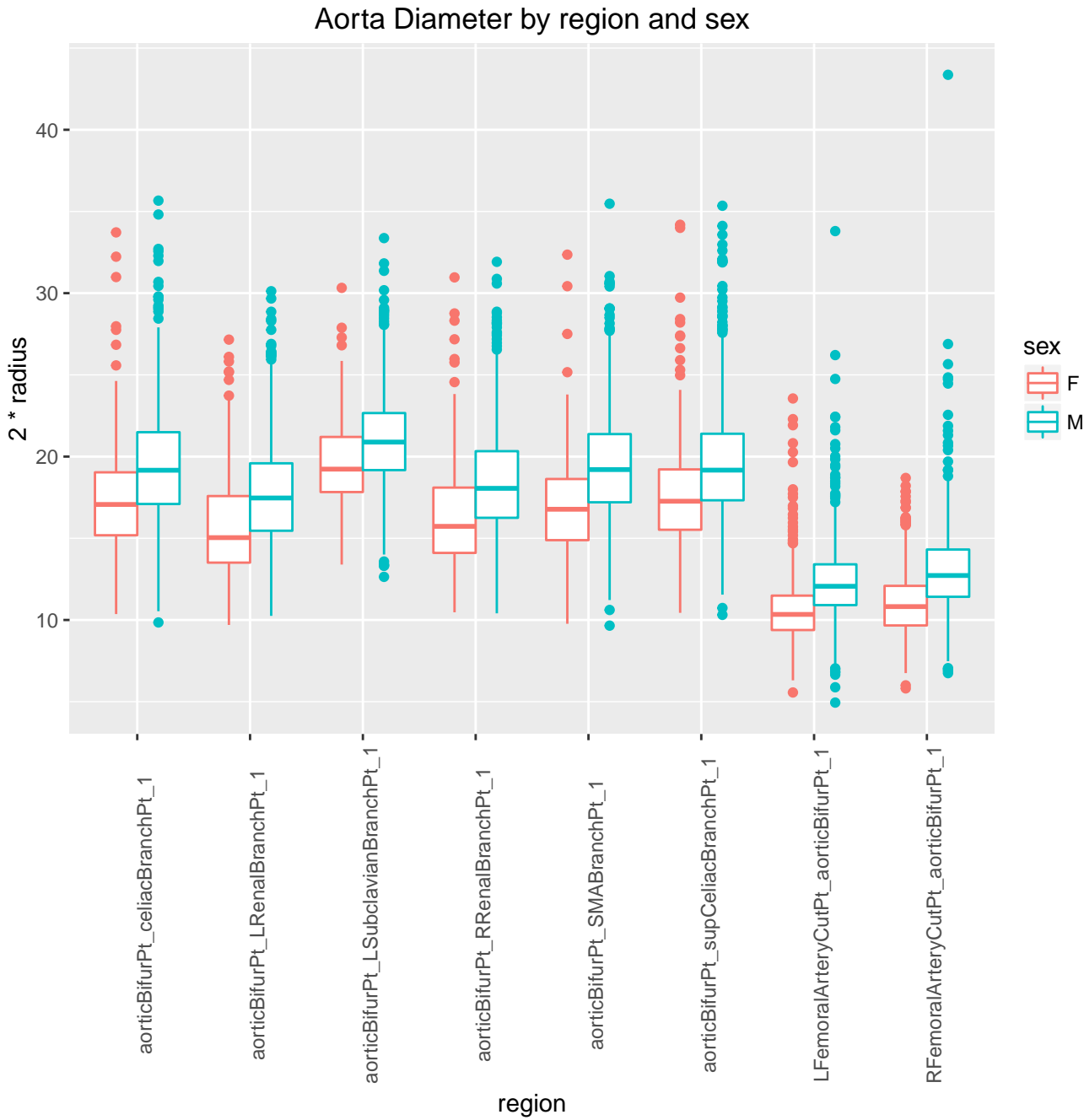
	Distance	Sex	Minimum	25th Percentile	50th Percentile	75th Percentile	Maximum
1	aorticBifurPt.celiacBranchPt	F	64.22	106.45	113.96	123.39	155.64
2	aorticBifurPt.celiacBranchPt	M	77.15	112.47	122.19	131.41	165.12
3	aorticBifurPt.LRenalBranchPt	F	31.30	77.57	84.77	92.79	135.68
4	aorticBifurPt.LRenalBranchPt	M	45.53	82.08	89.87	97.80	130.84
5	aorticBifurPt.LSubclavianBranchPt	F	208.82	308.79	323.90	338.96	400.40
6	aorticBifurPt.LSubclavianBranchPt	M	265.89	335.16	351.66	367.46	427.17
7	aorticBifurPt.RRenalBranchPt	F	48.33	81.67	88.16	95.93	141.18
8	aorticBifurPt.RRenalBranchPt	M	30.46	85.63	93.05	102.12	134.59
9	aorticBifurPt.SMABranchPt	F	53.91	94.32	102.83	110.87	145.80
10	aorticBifurPt.SMABranchPt	M	66.59	100.19	108.41	117.18	145.01
11	aorticBifurPt.supCeliacBranchPt	F	69.36	114.97	123.35	131.42	170.49
12	aorticBifurPt.supCeliacBranchPt	M	81.75	120.99	130.45	140.38	171.21
13	LFemoralArteryCutPt.aorticBifurPt	F	157.93	184.13	193.04	201.79	290.80
14	LFemoralArteryCutPt.aorticBifurPt	M	132.84	186.12	195.75	205.68	252.32
15	RFemoralArteryCutPt.aorticBifurPt	F	160.50	189.19	198.62	208.01	249.14
16	RFemoralArteryCutPt.aorticBifurPt	M	115.63	190.52	200.68	210.35	257.65



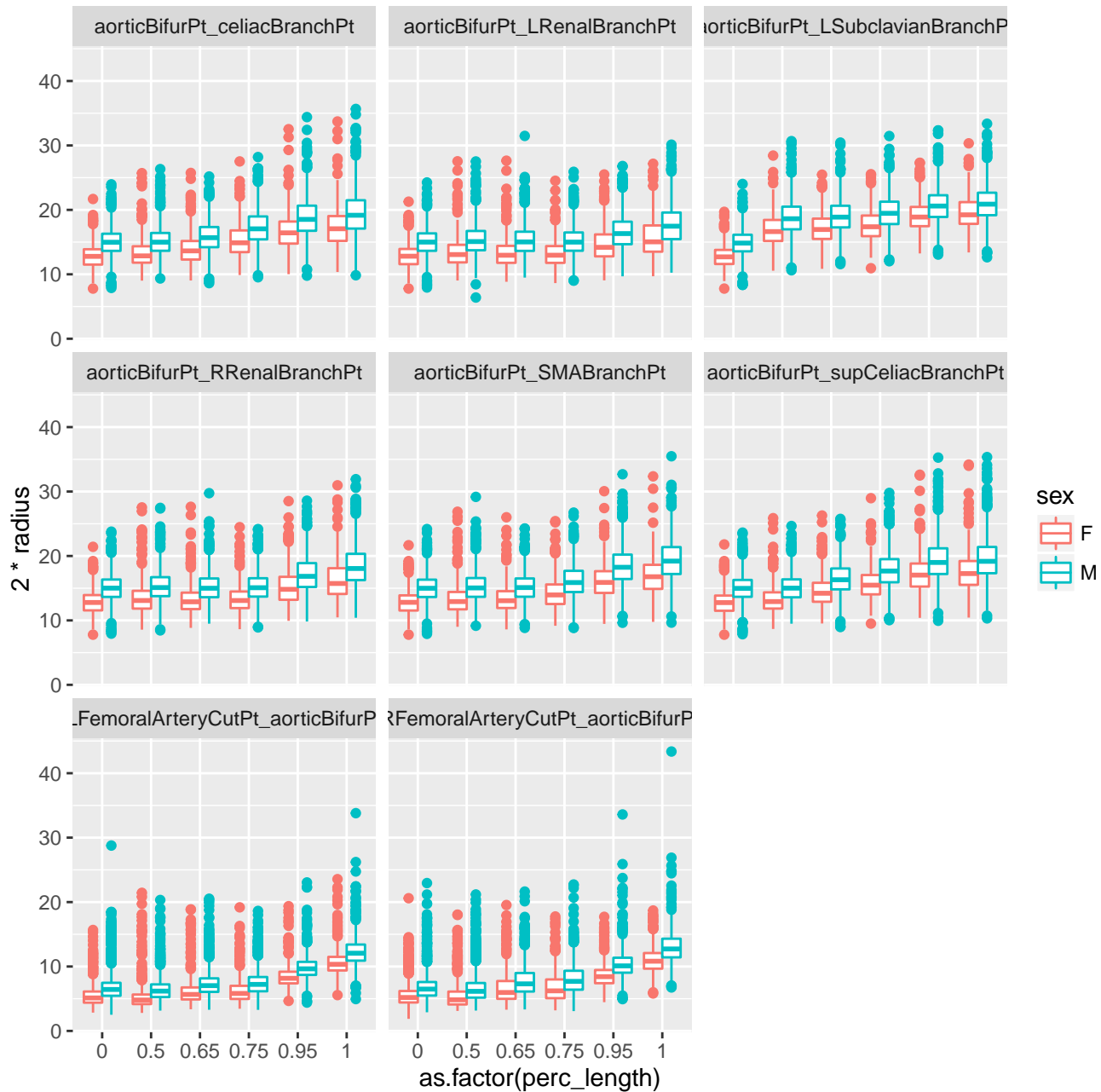


## 4 Diameters

	Diameter	Sex	Minimum	25th Percentile	50th Percentile	75th Percentile	Maximum
	Diameter	Sex	Minimum	25th Percentile	50th Percentile	75th Percentile	Maximum
1	celiacBranchPt	F	10.36	15.19	17.07	19.04	33.72
2	celiacBranchPt	M	9.85	17.10	19.16	21.49	35.66
3	LRenalBranchPt	F	9.70	13.51	15.04	17.58	27.16
4	LRenalBranchPt	M	10.25	15.46	17.47	19.59	30.12
5	LSubclavianBranchPt	F	13.39	17.83	19.23	21.20	30.32
6	LSubclavianBranchPt	M	12.64	19.17	20.89	22.66	33.37
7	RRenalBranchPt	F	10.47	14.11	15.73	18.10	30.97
8	RRenalBranchPt	M	10.41	16.25	18.06	20.33	31.92
9	SMABranchPt	F	9.77	14.89	16.78	18.63	32.36
10	SMABranchPt	M	9.65	17.20	19.20	21.38	35.47
11	supCeliacBranchPt	F	10.44	15.52	17.27	19.22	34.19
12	supCeliacBranchPt	M	10.31	17.33	19.17	21.40	35.35
13	LFemoralArteryCutPt	F	2.84	4.39	5.12	6.12	15.67
14	LFemoralArteryCutPt	M	2.51	5.46	6.44	7.47	28.77
15	RFemoralArteryCutPt	F	1.88	4.42	5.19	6.20	20.60
16	RFemoralArteryCutPt	M	2.90	5.49	6.49	7.59	22.95

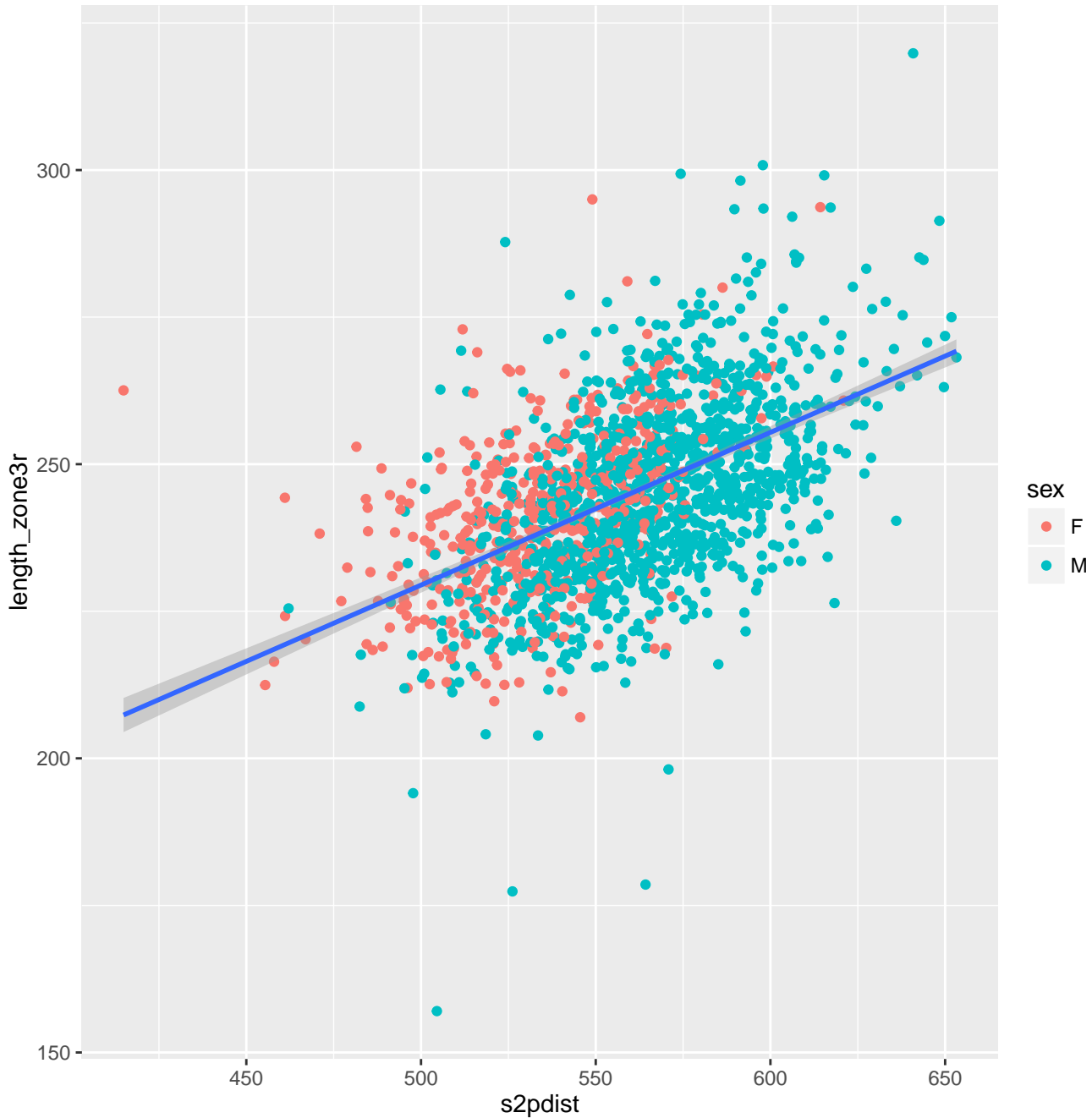


Aorta Diameter at points along regions of interest, by sex



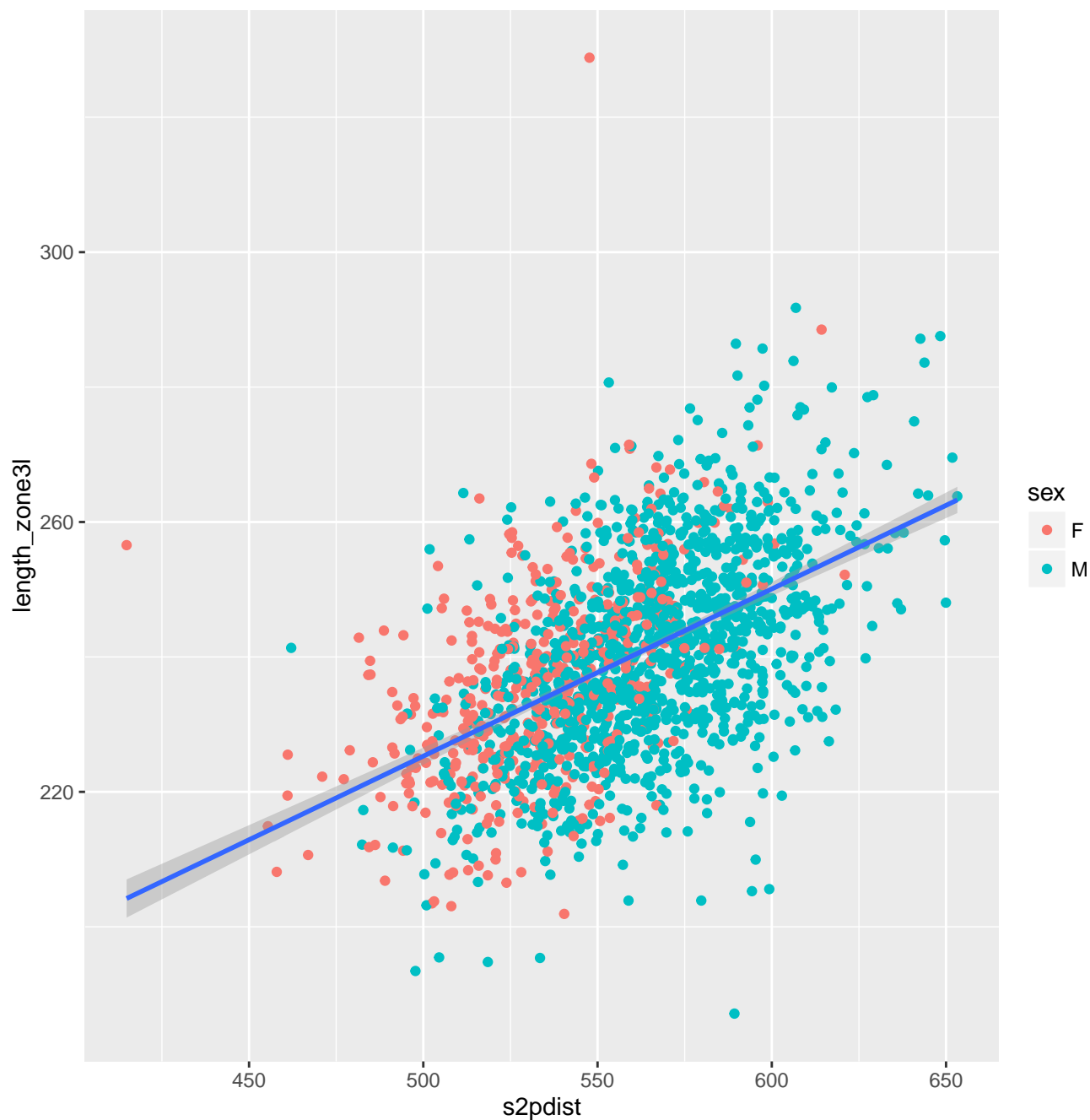
## 5 Linear Regression - Univariate

```
## Warning: Removed 50 rows containing non-finite values (stat_smooth).  
## Warning: Removed 50 rows containing missing values (geom_point).
```

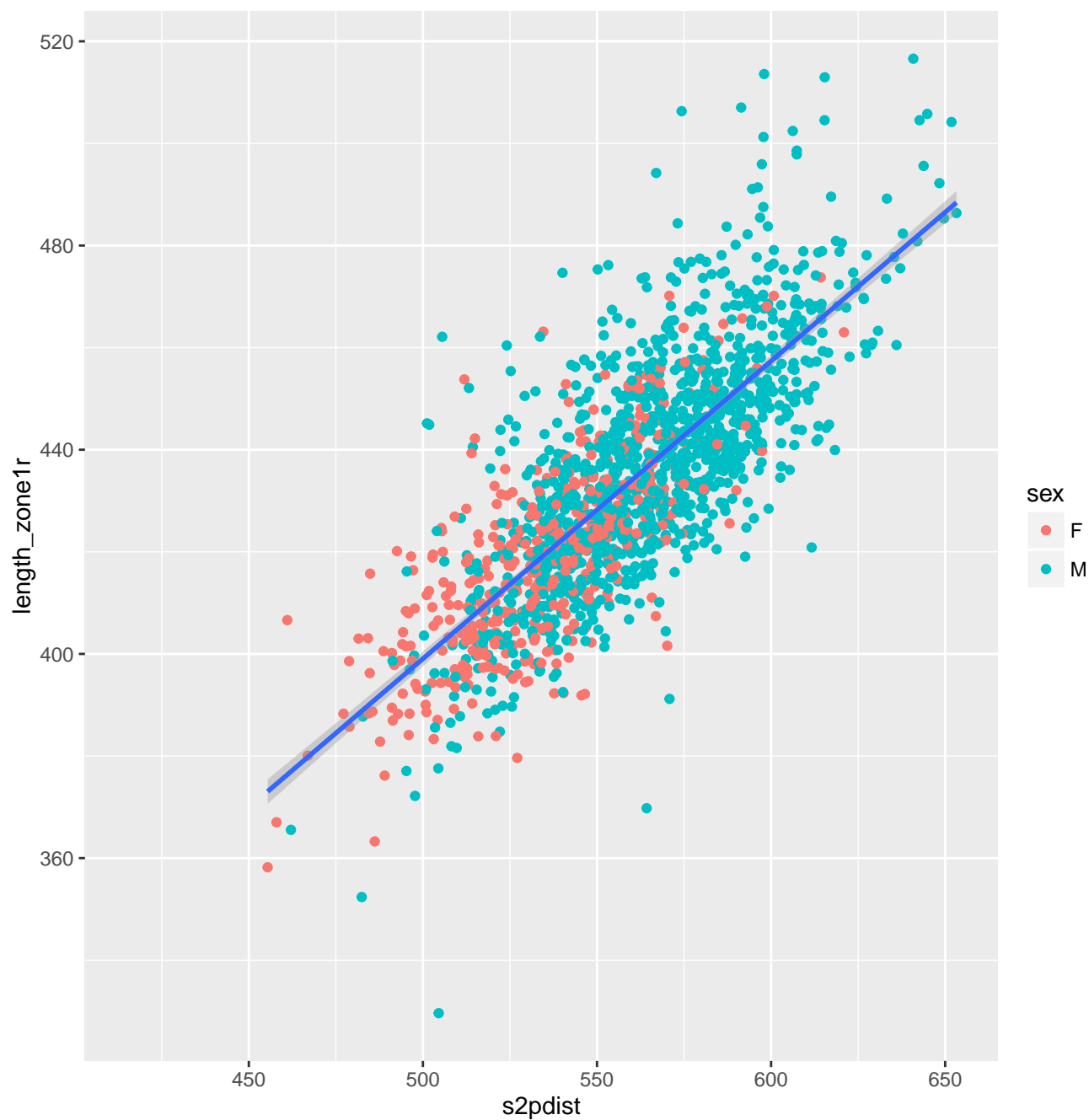




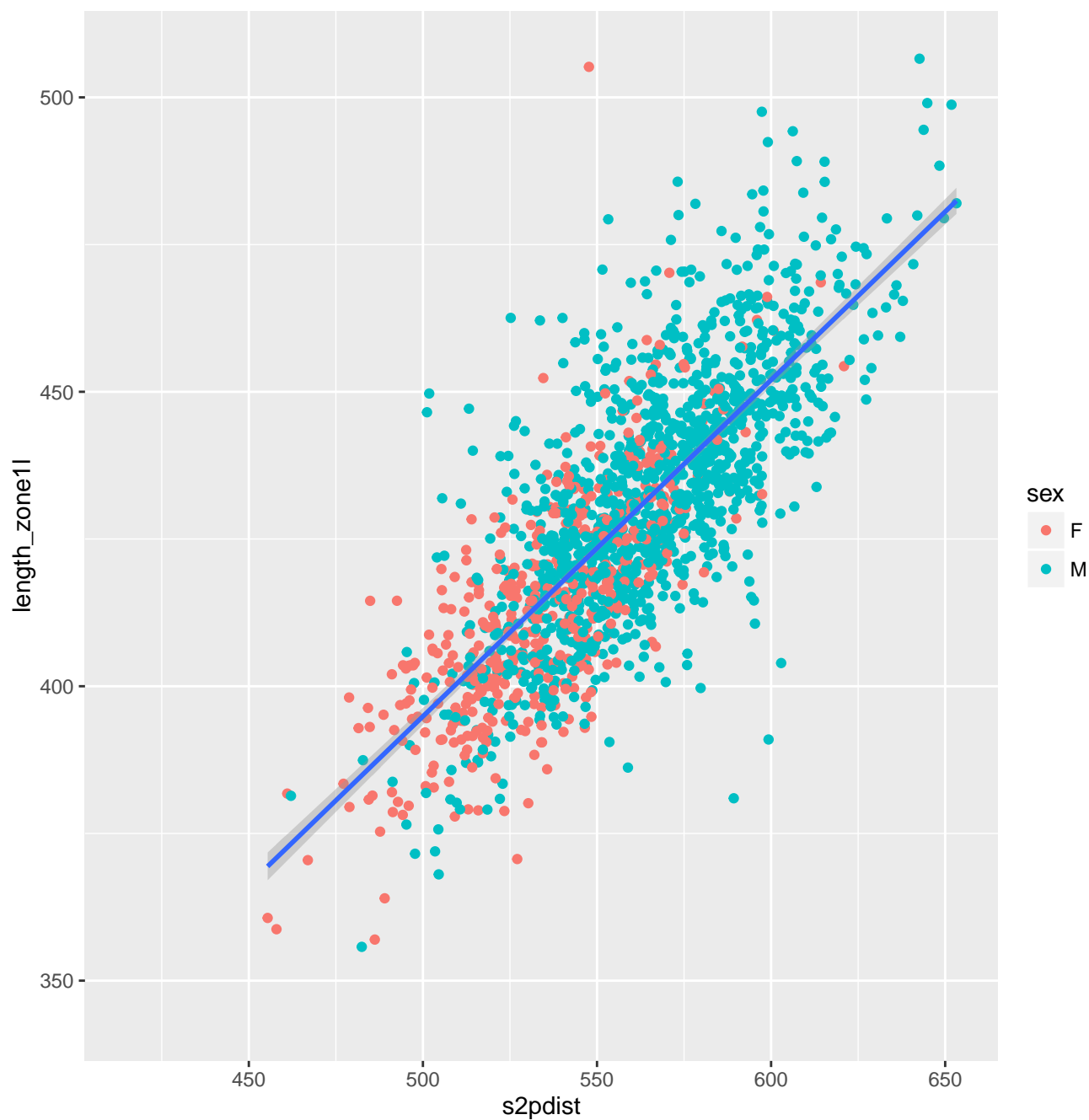
```
## Warning: Removed 50 rows containing non-finite values (stat_smooth).  
## Warning: Removed 50 rows containing missing values (geom_point).
```



```
## Warning: Removed 100 rows containing non-finite values (stat_smooth).  
## Warning: Removed 100 rows containing missing values (geom_point).
```



```
## Warning: Removed 100 rows containing non-finite values (stat_smooth).  
## Warning: Removed 100 rows containing missing values (geom_point).
```



## 5.1 Linear Regression - Multivariate

```
# putSectionLatex(section = "data_summary")
# fit a linear model to the data to generate an algorithm for predicting length to 50% along Zone 3
```

```

# total catheter length, including 40mm balloon, exclude hypotensive
fitr = glm(length_zone3r ~ age_exact + s2pdist, family = "gaussian", data = ds)
summary(fitr)

##
## Call:
## glm(formula = length_zone3r ~ age_exact + s2pdist, family = "gaussian",
##      data = ds)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -72.333   -8.271   -0.240    7.870   54.382
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  96.24974     5.69489  16.901 < 2e-16 ***
## age_exact    0.20543     0.03069   6.694 2.98e-11 ***
## s2pdist      0.25347     0.01010  25.107 < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for gaussian family taken to be 159.8251)
##
##      Null deviance: 370083  on 1632  degrees of freedom
## Residual deviance: 260515  on 1630  degrees of freedom
## (49 observations deleted due to missingness)
## AIC: 12925
##
## Number of Fisher Scoring iterations: 2

fitl = glm(length_zone3l ~ age_exact + s2pdist, family = "gaussian", data = ds)
summary(fitl)

##
## Call:
## glm(formula = length_zone3l ~ age_exact + s2pdist, family = "gaussian",
##      data = ds)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -58.488   -7.873   -0.140    7.776   88.468
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  96.241875     5.598053  17.19 < 2e-16 ***
## age_exact    0.211469     0.030168   7.01 3.48e-12 ***
## s2pdist      0.244489     0.009924  24.64 < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for gaussian family taken to be 154.4358)
##

```

```
##      Null deviance: 354696  on 1632  degrees of freedom
## Residual deviance: 251730  on 1630  degrees of freedom
##   (49 observations deleted due to missingness)
## AIC: 12869
##
## Number of Fisher Scoring iterations: 2

# add the predicted length based on this model to the dataset
ds$predict_length_zone3r = predict(fitr, ds)
ds$predict_length_zone3l = predict(fitl, ds)

# report the misclassification error of this model on the dataset
ds$length_zone3r_min = ds$length_RFemoralArteryCutPt_aorticBifurPt_1 + 40
ds$length_zone3r_max = ds$length_RFemoralArteryCutPt_aorticBifurPt_1 +
  pmin(ds$length_aorticBifurPt_LRenalBranchPt_1, ds$length_aorticBifurPt_RRenalBranchPt_1)
ds$length_zone3l_min = ds$length_LFemoralArteryCutPt_aorticBifurPt_1 + 40
ds$length_zone3l_max = ds$length_LFemoralArteryCutPt_aorticBifurPt_1 +
  pmin(ds$length_aorticBifurPt_LRenalBranchPt_1, ds$length_aorticBifurPt_RRenalBranchPt_1)
# misclassification = predicted length less than length from RFemoralArtery Cut Pt to aortic BifurPt

ds$predict_in_zone3r = ifelse(ds$predict_length_zone3r > ds$length_zone3r_min &
  ds$predict_length_zone3r < ds$length_zone3r_max, 1, 0)
ds$predict_in_zone3l = ifelse(ds$predict_length_zone3l > ds$length_zone3l_min &
  ds$predict_length_zone3l < ds$length_zone3l_max, 1, 0)

# ds$rnnum = seq(1,nrow(ds), by=1)
# ggplot(data=ds, aes(x=rnnum)) + geom_point(aes(y=predict_length_zone3r, colour=predict_in_zone3))

# ds[which(ds$predict_in_zone3 == 0),c("studyid", "length_zone3r_min", "length_zone3r_max",
  "predict_length_zone3r")] # misclassification % =
paste0(nrow(ds[which(ds$predict_in_zone3r == 0),])/nrow(ds[which(ds$predict_in_zone3r %in% c(0,1)),])*100, "\
\\%")

paste0(nrow(ds[which(ds$predict_in_zone3l == 0),])/nrow(ds[which(ds$predict_in_zone3l %in% c(0,1)),])*100, "\
\\%")

## [1] "38.878732480195\\%"

# View(ds[,c("studyid", "predict_in_zone3r", "predict_length_zone3r", "length_zone3r", "length_zone3l",
  "length_LFemoralArteryCutPt_aorticBifurPt_1", "length_RFemoralArteryCutPt_aorticBifurPt_1", "length_aorticBifurPt_LRenalBranchPt_1", "length_aorticBifurPt_RRenalBranchPt_1")])
# length_LFemoralArteryCutPt_aorticBifurPt_1: an algorithm for predicting length to midpoint of Zone 1
# total catheter length, including 40mm balloon, exclude hypotensive pts

fitr = glm(length_zone1r ~ age_exact + s2pdist, family = "gaussian", data = ds)
summary(fitr)

##
## Call:
## glm(formula = length_zone1r ~ age_exact + s2pdist, family = "gaussian",
##      data = ds)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
```

```
## -68.741   -8.360   -0.582    7.547   62.246
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 95.28519    6.04174   15.77  <2e-16 ***
## age_exact   0.56025    0.03234   17.32  <2e-16 ***
## s2pdist     0.57244    0.01072   53.40  <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for gaussian family taken to be 170.9564)
##
##      Null deviance: 820228  on 1584  degrees of freedom
## Residual deviance: 270453  on 1582  degrees of freedom
## (97 observations deleted due to missingness)
## AIC: 12652
##
## Number of Fisher Scoring iterations: 2

fitl = glm(length_zone1l ~ age_exact + s2pdist, family = "gaussian", data = ds)
summary(fitl)

##
## Call:
## glm(formula = length_zone1l ~ age_exact + s2pdist, family = "gaussian",
##      data = ds)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -66.564   -8.390   -0.246    7.926   73.903
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 95.19391    5.96267   15.96  <2e-16 ***
## age_exact   0.57154    0.03192   17.91  <2e-16 ***
## s2pdist     0.56325    0.01058   53.24  <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for gaussian family taken to be 166.5111)
##
##      Null deviance: 799780  on 1584  degrees of freedom
## Residual deviance: 263421  on 1582  degrees of freedom
## (97 observations deleted due to missingness)
## AIC: 12610
##
## Number of Fisher Scoring iterations: 2

# add the predicted length based on this model to the dataset
ds$predict_length_zone1r = predict(fitr, ds)
ds$predict_length_zone1l = predict(fitl, ds)
```

```

# report the misclassification error of this model on the dataset
ds$length_zone1r_min = ds$length_RFemoralArteryCutPt_aorticBifurPt_1 +
  ds$length_aorticBifurPt_celiacBranchPt_1 + 40
ds$length_zone1r_max = ds$length_RFemoralArteryCutPt_aorticBifurPt_1 +
  ds$length_aorticBifurPt_LSubclavianBranchPt_1

ds$length_zone1l_min = ds$length_LFemoralArteryCutPt_aorticBifurPt_1 +
  ds$length_aorticBifurPt_celiacBranchPt_1 + 40
ds$length_zone1l_max = ds$length_LFemoralArteryCutPt_aorticBifurPt_1 +
  ds$length_aorticBifurPt_LSubclavianBranchPt_1

# misclassification = predicted length less than length from RFemoralArtery Cut Pt to aortic BifurPt

ds$predict_in_zone1r = ifelse(ds$predict_length_zone1r > ds$length_zone1r_min &
  ds$predict_length_zone1r < ds$length_zone1r_max, 1, 0)
ds$predict_in_zone1l = ifelse(ds$predict_length_zone1l > ds$length_zone1l_min &
  ds$predict_length_zone1l < ds$length_zone1l_max, 1, 0)

# ds$rnum = seq(1,nrow(ds), by=1)
# ggplot(data=ds, aes(x=rnum)) + geom_point(aes(y=predict_length_zone1r, colour=predict_in_zone1))

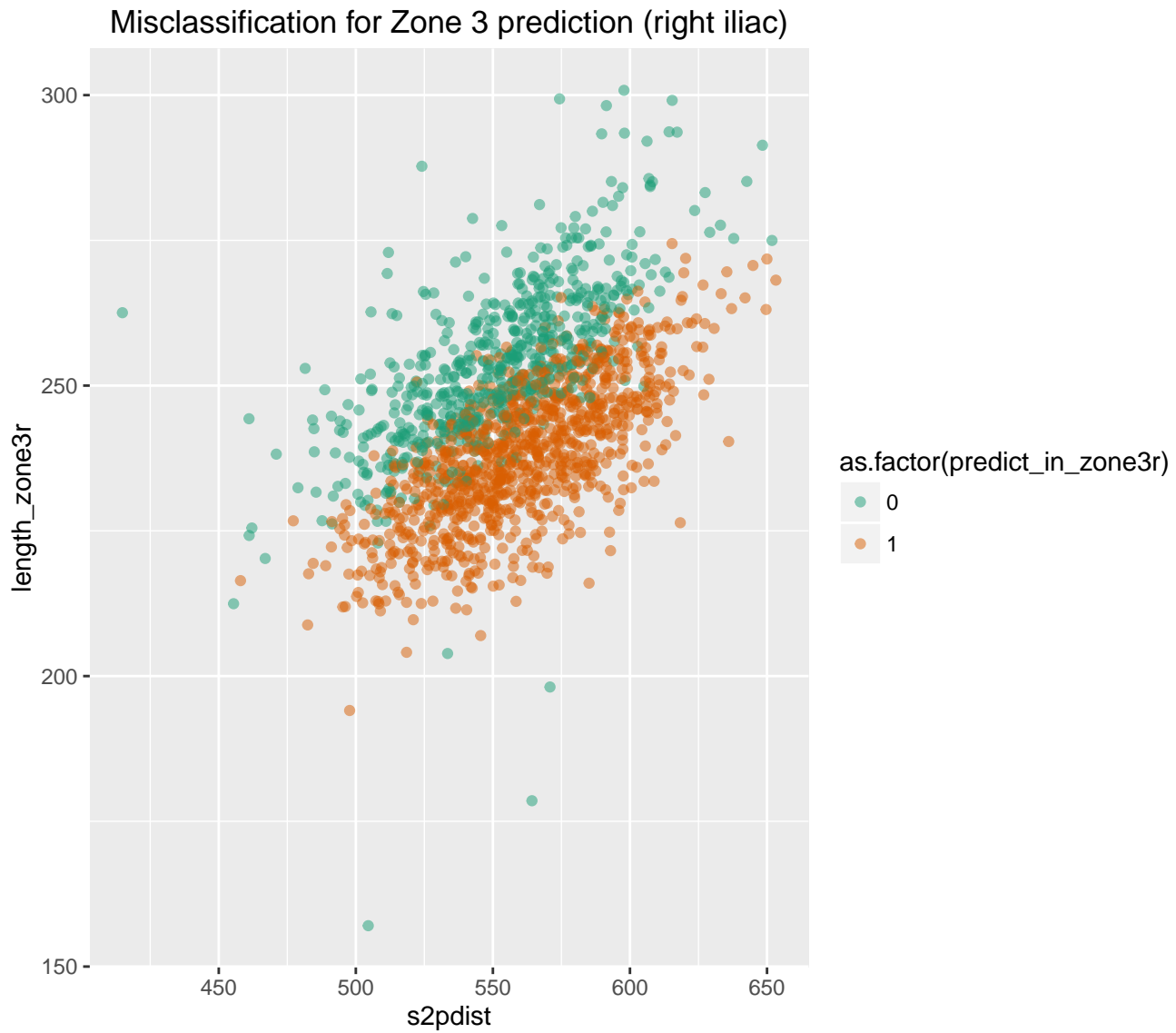
# ds[which(ds$predict_in_zone1 == 0),c("studyid", "length_zone1r_min", "length_zone1r_max",
  "predict_length_zone1r")] # misclassification % =
paste0(nrow(ds[which(ds$predict_in_zone1r == 0),])/nrow(ds[which(ds$predict_in_zone1r %in%
  c(0,1)),])*100, "\\%")

## [1] "0.0630517023959647\\%"

paste0(nrow(ds[which(ds$predict_in_zone1l == 0),])/nrow(ds[which(ds$predict_in_zone1l %in%
  c(0,1)),])*100, "\\%") ## [1] "0.126103404701020\\%"

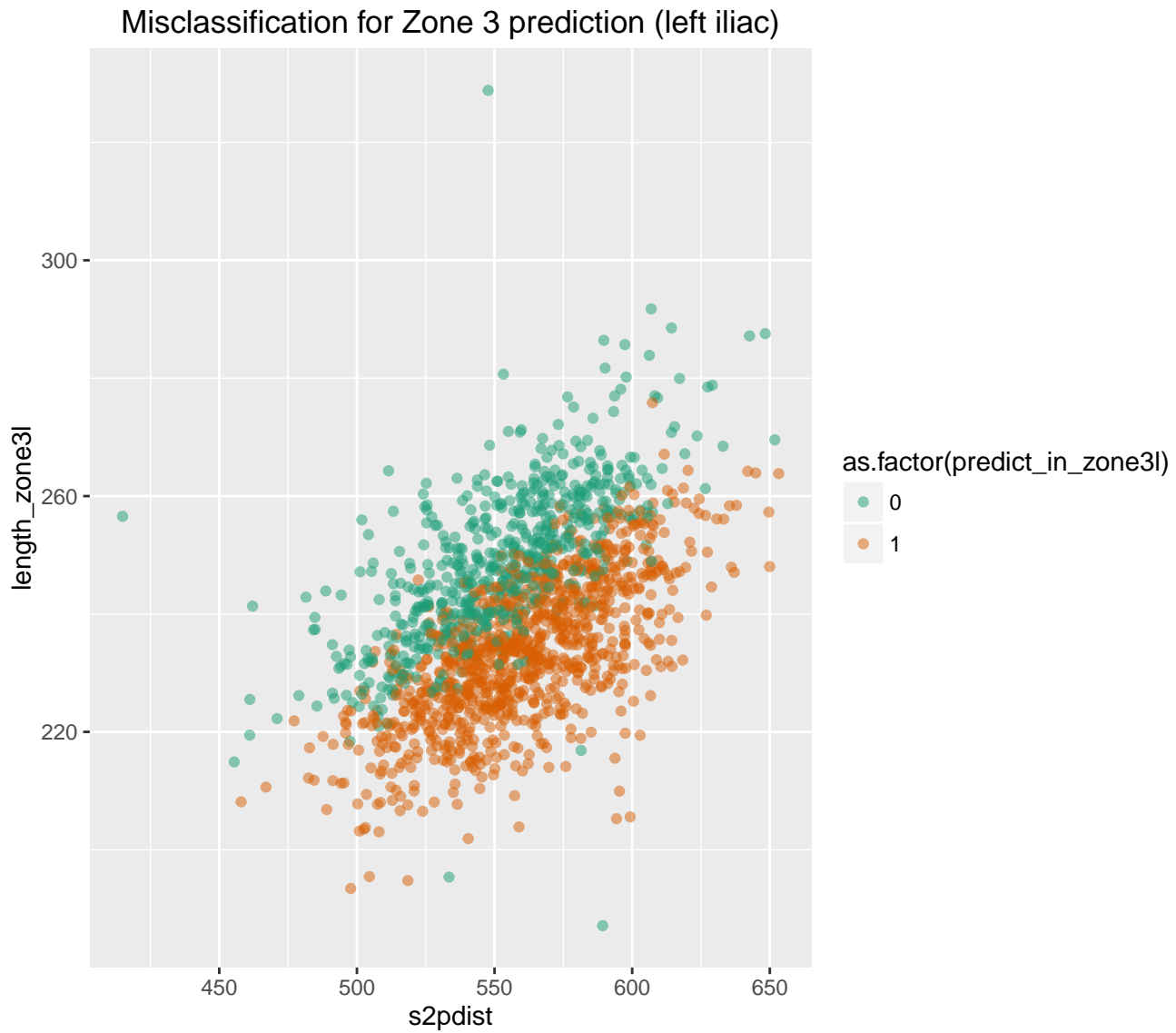
```

```
## Warning: Removed 49 rows containing missing values (geom point).
```

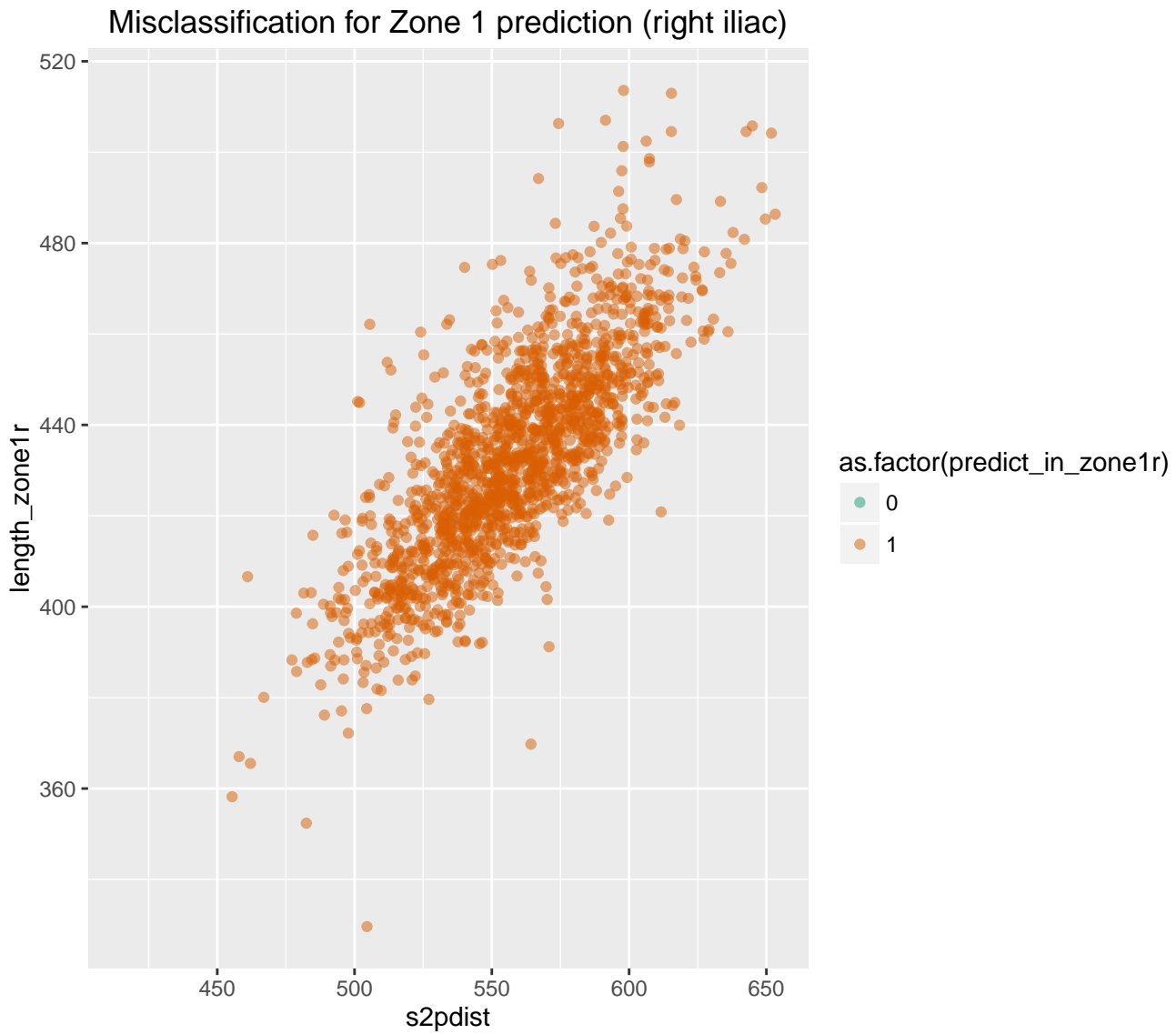


```
## Warning: Removed 49 rows containing missing values (geom_point).
```

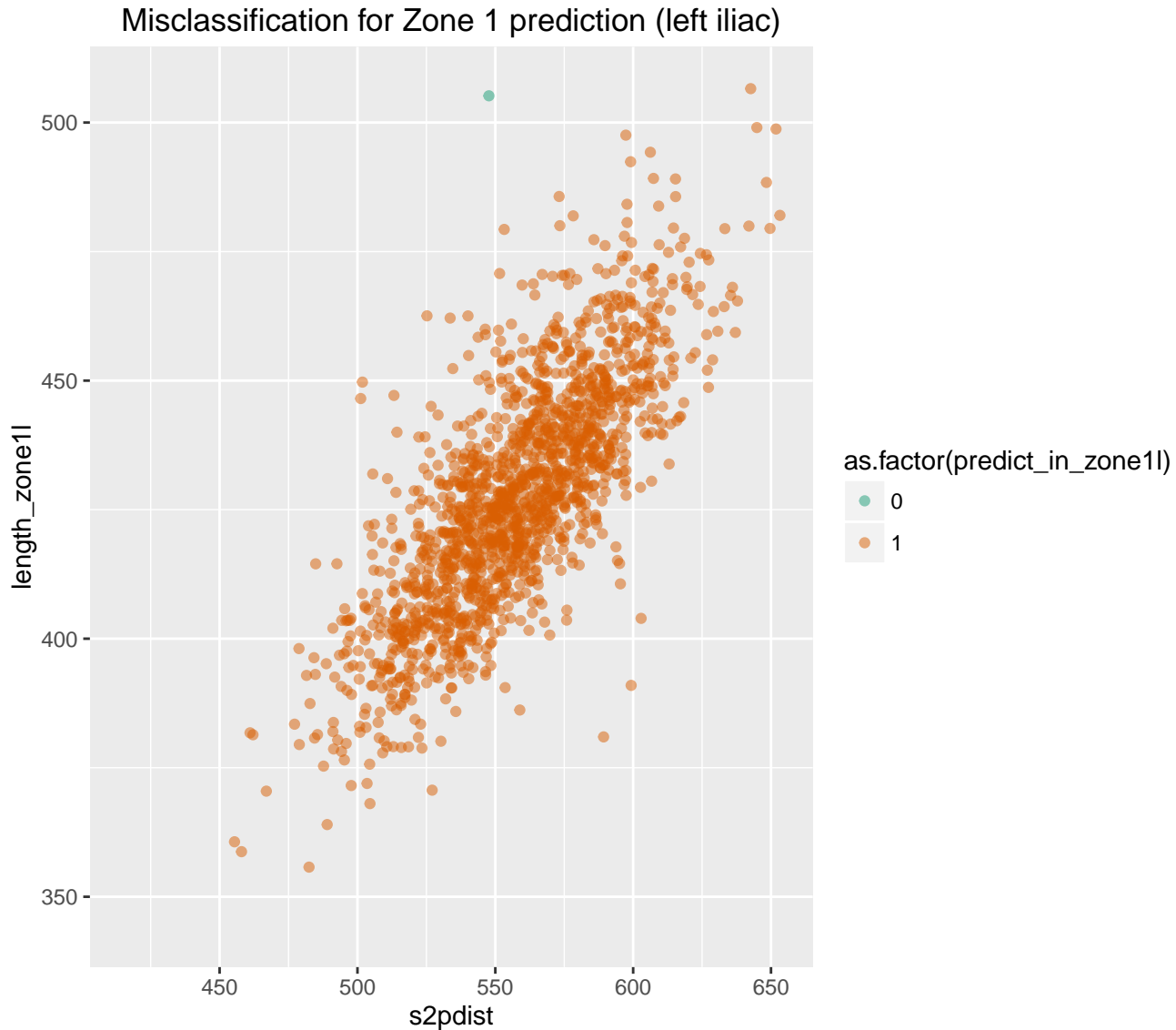




```
## Warning: Removed 97 rows containing missing values (geom_point).
```



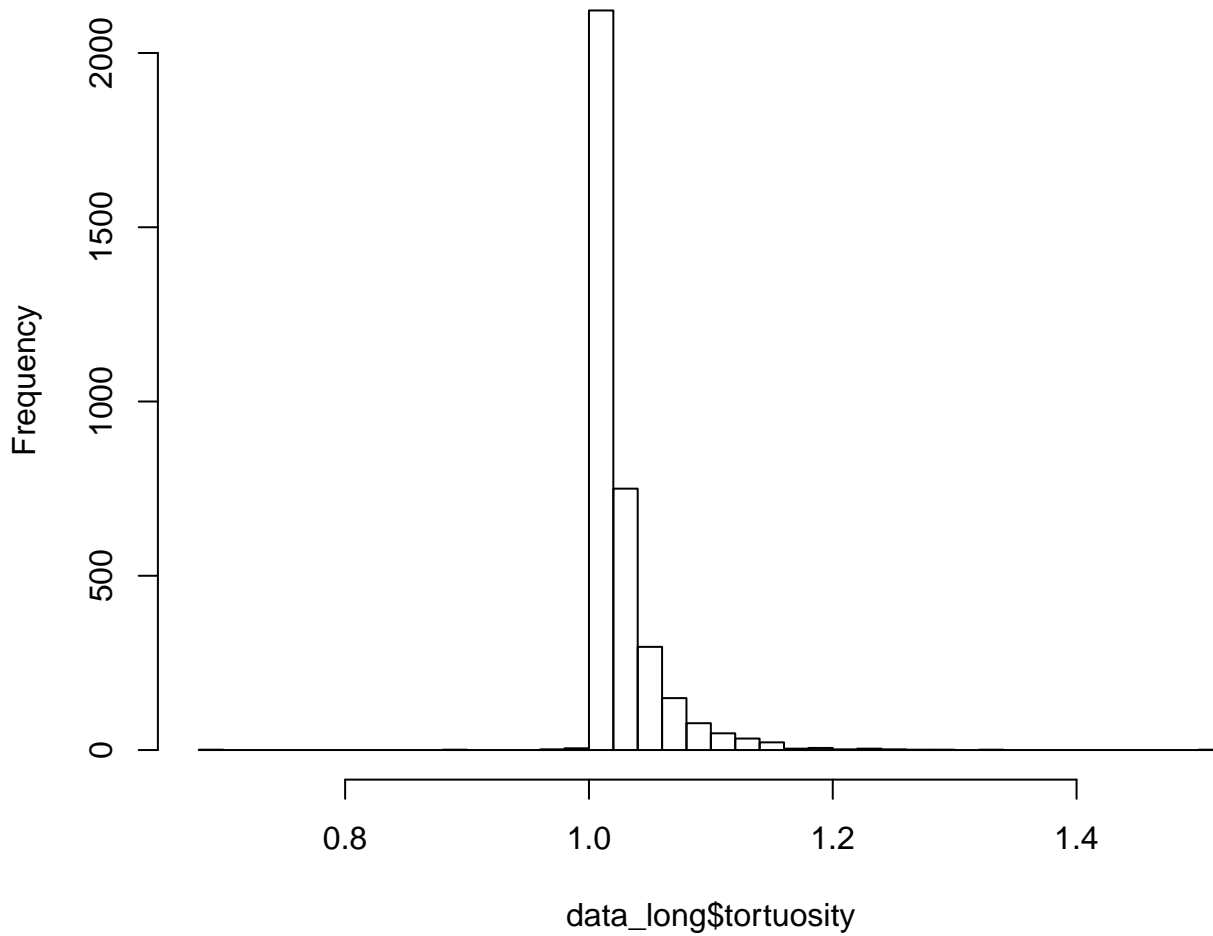
```
## Warning: Removed 97 rows containing missing values (geom_point).
```



## 6 Tortuosity

**Description:** Define tortuosity as  $L1/L2$ , where femoral cut point to aortic bifurcation along vasculature centerline = L1 and the same distance via straight line = L2. Tortuosity is then classified as follows:  $\leq 1.25$  grade 0;  $>1.25-1.5$  grade 1;  $>1.5-1.6$  grade 2;  $>1.6$  grade 3.

	LFemoralArteryCutPt.aorticBifurPt	RFemoralArteryCutPt.aorticBifurPt
0	1762	1762
1	1	2
2	1	0

**Histogram of data\_long\$tortuosity**

# APPENDIX G

## CRADA

## CRADA COVER SHEET

Action: New Agreement

Agreement Type: CRADA - Cooperative Research &amp; Development Agreement

(NOTE: This Cover Sheet is for internal management purposes only. It is not part of the Agreement &amp; neither party is bound to anything contained in it)

**Title:** Analytical Morphomics of Human Torso for Combat Injury Characterization

<b>Effective Date:</b>	6/13/2016	<b>Expiration Date:</b>	6/12/2019
<b>MRMC Control No:</b>	W81XWH-16-0325	<b>DA Control No:</b>	
<b>RAD:</b>	2 - Combat Casualty Care (CCCRP)	<b>Lab Field:</b>	No RAD response
<b>Concurrence obtained from appropriate RAD/USAMMDA/CBMS-JPMO program managers:</b>			NO
<b>Concurrence obtained from US Trade Rep (if "YES" then concurrence must be attached):</b>			N/A
<b>Keywords:</b>	Analytical Morphomics	CT Scan	Battlefield Casualties

<b>Laboratory:</b>	USAISR - US Army Institute of Surgical Research		
	<b>Office Symbol:</b>	MCMR-SRR-P	<b>DTIC Source Code:</b> 404885
	3698 Chambers Pass, Building 3611		
	JBSA Fort Sam Houston	Texas	78234-7767
	<b>Phone:</b>		
<b>Lab's Technical POC:</b>	LTC Kevin K. Chung, MD		
	<b>Office Symbol:</b>	MCMR-SRR	<b>Div/Dept:</b> Research Directorate
	<b>Phone</b>		<b>FAX:</b>
	<b>Email Address:</b>		
<b>Lab's Legal Counsel:</b>	Commander, US Army Medical Research and Materiel Command ATTN: MCMR-JA (Technology Transfer Legal Staff) 504 Scott Street, Fort Detrick, MD 21702-5012		
	<b>Legal Reviewer:</b>	N/A - no deviation from template	

<b>Partner's Technical POC:</b>	Dr. Steward C. Wang		
	Regents of the University of Michigan		
	1500 E. Medical Center Drive, 1C-421-UH		
	Ann Arbor	MI	48109-5033
	<b>Entity Status:</b>	Educational	<b>DTIC Source Code:</b> 228600
	<b>Email Address:</b>	stewartw@umich.edu	
	<b>DoD Status:</b>	Traditional (Collaboration with DoD in the past 3 years)	

**Summary:**

Perform the morphomic analysis of the CT scan images of battlefield casualties.

A COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

Between

**Regents of the University of Michigan  
Ann Arbor, MI 48109  
("UMichigan")**

and

**U.S. Army Institute of Surgical Research  
JBSA Fort Sam Houston, Texas 78234-7767  
("USAISR")**

Article 1. Background

1.00 This Agreement is entered into under the authority of the Federal Technology Transfer Act of 1986, 15 U.S.C. 3710a, et seq., between UMichigan and the USAISR, the parties to this Agreement.

1.01 USAISR, on behalf of the U.S. Government, and UMichigan desire to cooperate in research and development on **Analytical Morphomics of Human Torso for Combat Injury Characterization** according to the attached Statement of Work (SOW) described in Appendix A. NOW, THEREFORE, the parties agree as follows:

Article 2. Definitions

2.00 The following terms are defined for this Agreement as follows:

2.01 "Agreement" means this cooperative research and development agreement.

2.02 "Invention" and "Made" have the meanings set forth in Title 15 U.S.C. Section 3703(7) and (8).

2.03 "Proprietary Information" means information marked with a proprietary legend, or if disclosed orally or visually, summarized in writing, marked with a proprietary legend, and then delivered to the recipient within twenty (20) days of oral or visual disclosure, which embodies trade secrets developed at private expense or which is confidential business or financial information, provided that such information:



(i) is not generally known, or which becomes generally known or available during the period of this Agreement from other sources without obligations concerning their confidentiality;

(ii) has not been made available by the owners to others without obligation concerning its confidentiality; and

(iii) is not already available to the receiving party without obligation concerning its confidentiality.

(iv) is not independently developed by or on behalf of the receiving party, without reliance on the information received hereunder.

2.04 "Subject Data" means all recorded information first produced in the performance of this Agreement.

2.05 "Subject Invention" means any Invention Made as a consequence of, or in relation to, the performance of work under this Agreement.

### Article 3. Research Scope and Administration

3.00 Statement of Work. Research performed under this Agreement shall be performed in accordance with the SOW incorporated as a part of this Agreement at Appendix A. It is agreed that any descriptions, statements, or specifications in the SOW shall be interpreted as goals and objectives of the services to be provided under this Agreement and not requirements or warranties. USAISR and UMichigan will endeavor to achieve the goals and objectives of such services; however, each party acknowledges that such goals and objectives, or any anticipated schedule of performance, may not be achieved.

3.01 Review of Work. Periodic conferences shall be held between the parties for the purpose of reviewing the progress of work. It is understood that the nature of this research is such that completion within the period of performance specified, or within the limits of financial support allocated, cannot be guaranteed. Accordingly, all research will be performed in good faith.

3.02 Principal Investigator. Any work required by the USAISR under the SOW will be performed under the supervision of LTC Kevin K. Chung, MD (Research Directorate, US Army Institute of Surgical Research, 3698 Chambers Pass, JBSA Fort Sam Houston, Texas 78234-7767, 210-539-4327, FAX 210-539-8522, kevin.k.chung.mil@mail.mil, who, as co-principal investigator has responsibility for the scientific and technical conduct of this project on behalf of the USAISR. Any work required by UMichigan under the SOW will be performed under the supervision of Stewart C. Wang, MD PhD (1500 E. Medical Center Drive, 1C-421-UH, Ann Arbor, MI 48109-5033, 734-936-9690, FAX: 734-936-



9657, [stewartw@umich.edu](mailto:stewartw@umich.edu), who, as co-principal investigator has responsibility for the scientific and technical conduct of this project on behalf of UMichigan.

3.03 Collaboration Changes. If at any time the co-principal investigators determine that the research data dictates a substantial change in the direction of the work, the parties shall make a good faith effort to agree on any necessary change to the SOW and make the change by written notice to the addresses listed in section 14.05 Notices.

3.04 Final Report. The parties shall prepare a final report of the results of this project within six months after completing the SOW.

#### Article 4. Ownership and Use of Physical Property

4.01 Ownership of Materials or Equipment. All materials or equipment developed or acquired under this Agreement by the parties shall be the property of the party which developed or acquired the property, except that government equipment provided by USAISR (1) which through mixed funding or mixed development must be integrated into a larger system, or (2) which through normal use at the termination of the Agreement has a salvage value that is less than the return shipping costs, shall become the property of UMichigan.

4.02 Use of Provided Materials. Both parties agree that any materials relating to them which were provided by one party to the other party will be used for research purposes only. The materials shall not be sold, offered for sale, used for commercial purposes, or be furnished to any other party without advance written approval from the Provider's official signing this Agreement or from another official to whom the authority has been delegated, and any use or furnishing of material shall be subject to the restrictions and obligations imposed by this Agreement.

#### Article 5. Financial Obligation

5.00 The parties shall each be individually responsible for funding its own respective researchers throughout this Agreement, including USAISR facilities, salaries, overhead and indirect costs, etc. Each party may determine at its own discretion, the amount of resources, personnel, materials or funds it will devote to the work under this Agreement.

#### Article 6. Patent Rights

6.00 Reporting. The parties shall promptly report to each other all Subject Inventions reported to either party by its employees. All Subject Inventions Made during the performance of this Agreement shall be listed in the Final Report required by this Agreement.

6.01 UMichigan Employee Inventions. USAISR waives any ownership rights the U.S. Government may have in Subject Inventions Made by UMichigan employees and agrees that UMichigan shall have the option to retain title in Subject Inventions Made by UMichigan employees. UMichigan shall notify USAISR promptly upon making this election and agrees to timely file patent applications on UMichigan's Subject Invention at its own expense. UMichigan agrees to grant to the U.S. Government on UMichigan's Subject Inventions a nonexclusive, nontransferable, irrevocable, paid-up license in the patents covering a Subject Invention, to practice or have practiced, throughout the world by, or on behalf of the U.S. Government. The nonexclusive license shall be evidenced by a confirmatory license agreement prepared by UMichigan in a form satisfactory to USAISR.

6.02 USAISR Employee Inventions. USAISR shall have the initial option to retain title to, and file patent application on, each Subject Invention Made by its employees. The USAISR agrees to grant an exclusive license to any invention arising under this Agreement to which it has ownership to UMichigan in accordance with Title 15 U.S. Code Section 3710a, on terms negotiated in good faith. Any invention arising under this Agreement is subject to the retention by the U.S. Government of nonexclusive, nontransferable, irrevocable, paid-up license to practice, or have practiced, the invention throughout the world by or on behalf of the U.S. Government.

6.03 Joint Inventions. Any Subject Invention patentable under U.S. patent law which is Made jointly by USAISR employees and UMichigan employees under the Scope of Work of this Agreement shall be jointly owned by the parties. The parties shall discuss together a filing strategy and filing expenses related to the filing of the patent covering the Subject Invention. If a party decides not to retain its ownership rights to a jointly owned Subject Invention, it shall offer to assign such rights to the other party, pursuant to Paragraph 6.05, below.

6.04 Government Contractor Inventions. In accordance with 37 Code of Federal Regulations 401.14, if one of USAISR's Contractors conceives an invention while performing services at USAISR to fulfill USAISR's obligations under this Agreement, USAISR may require the Contractor to negotiate a separate agreement with UMichigan regarding allocation of rights to any Subject Invention the Contractor makes, solely or jointly, under this Agreement. The separate agreement (i.e., between UMichigan and the Contractor) shall be negotiated prior to the Contractor undertaking work under this Agreement or, with the USAISR's permission, upon the identification of a Subject Invention. In the absence of such a separate agreement, the Contractor agrees to grant UMichigan an option for a license in Contractor's inventions of the same scope and terms set forth in this Agreement for inventions made by USAISR employees.



6.05 Filing of Patent Applications. The party having the right to retain title to, and file patent applications on, a specific Subject Invention may elect not to file patent applications, provided it so advises the other party within 90 days from the date it reports the Subject Invention to the other party. Thereafter, the other party may elect to file patent applications on the Subject Invention and the party initially reporting the Subject Invention agrees to assign its ownership interest in the Subject Invention to the other party.

6.06 Patent Expenses. The expenses attendant to the filing of patent applications shall be borne by the party filing the patent application, unless otherwise agreed. Each party shall provide the other party with copies of the patent applications it files on any Subject Invention, along with the power to inspect and make copies of all documents retained in the official patent application files by the applicable patent office. The parties agree to reasonably cooperate with each other in the preparation and filing of patent applications resulting from this Agreement.

#### Article 7. Exclusive License

7.00 Grant. The USAISR agrees to grant to UMichigan an exclusive license in each U.S. patent application, and patents issued thereon, covering a Subject Invention, which is filed by the USAISR subject to the reservation of a nonexclusive, nontransferable, irrevocable, paid-up license to practice and have practiced the Subject Invention on behalf of the United States.

7.01 Exclusive License Terms. UMichigan shall elect or decline to exercise its right to acquire an exclusive license to any Subject Invention within six months of being informed by the USAISR of the Subject Invention. The specific royalty rate and other terms of license shall be negotiated promptly in good faith and in conformance with the laws of the United States.

#### Article 8. Background Patent(s)

8.00 USAISR Background Patent(s): USAISR has filed patent application(s), or is the assignee of issued patent(s), listed below which contain(s) claims that are related to research contemplated under this Agreement. No license(s) to this/these patent applications or issue patents is/are granted under this Agreement, and this/these application(s) and any continuations to it/them are specifically excluded from the definitions of "Subject Invention" contained in this Agreement: None.

8.01 UMichigan Background Patent(s): UMichigan has filed patent application(s), or is the assignee of issued patent(s), listed below which contain(s) claims that are related to research contemplated under this Agreement. No license(s) to this/these patent applications or issue patents is/are granted under this Agreement, and this/these application(s) and any

continuations to it/them are specifically excluded from the definitions of "Subject Invention" contained in this Agreement:

Analytic morphomics: high speed medical image automated analysis method  
(Wang, et al.)  
January 26, 2016  
United States Patent # 9,241,634

#### Article 9. Subject Data and Proprietary Information

9.00 Subject Data Ownership. Subject Data shall be jointly owned by the parties. Each party, upon request to the other party, shall have the right to review and to request delivery of all Subject Data, and delivery shall be made to the requesting party within two weeks of the request, except to the extent that such Subject Data are subject to a claim of confidentiality or privilege by a third party.

9.01 Proprietary Information/Confidential Information. Each party shall place a proprietary notice on all information it delivers to the other party under this Agreement that it asserts is proprietary. The parties agree that any Proprietary Information or Confidential Information furnished by one party to the other party under this Agreement, or in contemplation of this Agreement, shall be used, reproduced and disclosed by the receiving party only for the purpose of carrying out this Agreement, and shall not be released by the receiving party to third parties unless consent to such release is obtained from the providing party.

9.02 Army limited-access database. Notwithstanding anything to the contrary in this Article, the existence of established CRADAs specifying areas of research and their total dollar amounts may be documented on limited access, password-protected websites of the U.S. Army Medical Research and Materiel Command (the parent organization of USAISR), to provide the Command's leadership with a complete picture of military research efforts.

9.03 USAISR Contractors. UMichigan acknowledges and agrees to allow USAISR's disclosure of UMichigan's proprietary information to USAISR's Contractors for the purposes of carrying out this Agreement. USAISR agrees that it has or will ensure that its Contractors are under written obligation not to disclose UMichigan's proprietary information, except as required by law or court order, before Contractor employees have access to UMichigan's proprietary information under this Agreement.

9.04 Release Restrictions. USAISR shall have the right to use all Subject Data for any Governmental purpose, but shall not release Subject Data publicly except: (i) USAISR in reporting on the results of research may publish Subject Data in technical articles and other documents to the extent it determines to be appropriate; and (ii) USAISR may release Subject Data where release is required



by law or court order. The parties agree to confer prior to the publication of Subject Data to assure that no Proprietary Information is released and that patent rights are not jeopardized. Prior to submitting a manuscript for review which contains the results of the research under this Agreement, or prior to publication, each party shall be offered at least forty-five (45) days to review any proposed manuscript and request up to sixty (60) days to delay publication in order to file patent applications. In no event shall the delay in publication exceed one hundred and twenty (120) days.

9.05 FDA Documents. If this Agreement involves a product regulated by the U.S. Food and Drug Administration (FDA), then UMichigan or the U.S. Army Medical Research and Materiel Command, as appropriate, may file any required documentation with the FDA. In addition, the parties authorize and consent to allow each other or their contractors or agents access to, or to cross-reference, any documents filed with the FDA related to the product. In the event the UMichigan decides not to continue development or seeking FDA approval or stops commercializing in the US, then the Army has access to all the data/current FDA filings, and a non-exclusive license to any necessary underlying intellectual property.

#### Article 10. Information Assurance and Data Management

The parties to this agreement acknowledge the importance of maintaining information security and managing the data exchanged hereunder in compliance with all applicable legal authorities, affording the highest degree of protection practicable. The parties agree to the following:

10.01 The following data will be collected, shared, used or stored in support of this non-reimbursable agreement: human clinical test data.

10.02 All data generated under this agreement, as well as all rights in that data, will be jointly owned by the parties to this agreement. Both parties assume responsibility for storing, protecting and managing data in compliance with applicable legal authorities. Each party will notify the other party prior to the destruction of any data in their possession that is generated under this agreement.

10.03 Both parties will ensure that their personnel handling the data described above satisfy all necessary training requirements and obtain any requisite clearances to handle said data on any applicable information system. All personnel participating in data exchange must be under a duty to hold said data confidential. If there will be any individual lacking such a duty of confidentiality, that individual must sign a non-disclosure agreement before handling the data.

10.04 Both parties are responsible for ensuring that any data shared is both transmitted and stored in a secured information system network that is fully compliant with all applicable Federal legal authorities.

10.05 The data generated as a result of this interaction may be used to support the funding entities' regulatory filings, professional publications and other purposes.

10.06 Any public release of data prior to final transfer to the funding agency requires review and approval by the public affairs and security offices of both signatories to this agreement.

#### Article 11. Termination

11.00 Termination by Mutual Consent. UMichigan and USAISR may elect to terminate this Agreement, or portions thereof, at any time by mutual consent.

11.01 Termination by Unilateral Action. Either party may unilaterally terminate this entire Agreement at any time by giving the other party written notice, not less than 30 days prior to the desired termination date.

11.02 Termination Procedures. In the event of termination, the parties shall specify the disposition of all property, patents and other results of work accomplished or in progress, arising from or performed under this Agreement by written notice. Upon receipt of a written termination notice, the parties shall not make any new commitments and shall, to the extent feasible, cancel all outstanding commitments that relate to this Agreement. Notwithstanding any other provision of this Agreement, any exclusive license entered into by the parties relating to this Agreement shall be simultaneously terminated unless the parties agree to retain such exclusive license.

#### Article 12. Disputes

12.00 Settlement. Any dispute arising under this Agreement which is not disposed of by agreement of the principal investigators shall be submitted jointly to the signatories of this Agreement. A joint decision of the signatories or their designees shall be the disposition of such dispute. However, nothing in this section shall prevent any party from pursuing any and all administrative and/or judicial remedies which may be allowable.

#### Article 13. Liability



13.00 Property. Neither party shall be responsible for damages to any property provided to, or acquired by, the other party pursuant to this Agreement.

13.01 UMichigan's Employees. To the extent permitted by law, UMichigan agrees to indemnify and hold harmless the U.S. Government for liability of any kind involving an employee of UMichigan arising out of negligent act or omission in connection with this Agreement, and for all liabilities arising out of the use by UMichigan of USAISR's research and technical developments, or out of any use, sale or other disposition by UMichigan of products made based on USAISR's technical developments, except to the extent the liability is due to the negligence of USAISR under the provisions of the Federal Tort Claims Act. This provision shall survive termination or expiration of this Agreement.

13.02 No Warranty. The parties make no express or implied warranty as to any matter whatsoever, including the conditions of the research or any Invention or product, whether tangible or intangible, Made, or developed under this agreement, or the ownership, merchantability, or fitness for a particular purpose of the research or any Invention or product.

#### Article 14. Miscellaneous

14.00 Governing Law. The construction, validity, performance, and effect of this Agreement shall be governed for all purposes by the laws applicable to the United States Government.

14.01 Export Control and Biological Select Agents and Toxins. The obligations of the parties to transfer technology to one or more other parties, provide technical information and reports to one or more other parties, and otherwise perform under this Agreement are contingent upon compliance with applicable United States export control laws and regulations. The transfer of certain technical data and commodities may require a license from a cognizant agency of the United States Government or written assurances by the Parties that the Parties shall not export technical data, computer software, or certain commodities to specified foreign countries without prior approval of an appropriate agency of the United States Government. The Parties do not, alone or collectively, represent that a license shall not be required, nor that, if required, it shall be issued. In addition, where applicable, the parties agree to fully comply with all laws, regulations, and guidelines governing biological select agents and toxins.

14.02 Independent Contractors. The relationship of the parties to this Agreement is that of independent contractors and not as agents of each other or as joint venturers or partners.

14.03 Use of Name or Endorsements. (a) The parties shall not use the name of the other party on any product or service which is directly or indirectly

related to either this Agreement or any patent license or assignment agreement which implements this Agreement without the prior approval of the other party.

(b) By entering into this Agreement, USAISR does not directly or indirectly endorse any product or service provided, or to be provided, by UMichigan, its successors, assignees, or licensees. UMichigan shall not in any way imply that this Agreement is an endorsement of any such product or service. Press releases or other public releases of information shall be coordinated between the parties prior to release, except that the USAISR may release the name of UMichigan and the title of the research without prior approval from UMichigan.

14.04 Survival of Specified Provisions. The rights specified in provisions of this Agreement covering Patent Rights, Subject Data and Proprietary Information, and Liability shall survive the termination or expiration of this Agreement.

14.05 Notices. All notices pertaining to or required by this Agreement shall be in writing and shall be signed by an authorized representative addressed as follows:

If to UMichigan:

Ryan Lankton, JD, MSI  
Project Representative  
Office of Research and Sponsored  
Projects University of Michigan  
3003 South State Street, Room 1018  
Ann Arbor, MI 48109-1274

If to USAISR:

U.S. Army Institute of Surgical Research  
MCMR-SRR-P (Rick Jocz)  
3698 Chambers Pass  
Building 3611  
JBSA Fort Sam Houston, Texas  
78234-7767

Any party may change such address by notice given to the other in the manner set forth above.

#### Article 15. Duration of Agreement and Effective Date

15.01 Effective Date. This Agreement shall enter into force as of the date it is signed by the last authorized representative of the parties.

15.02 Signature Execution. This Agreement may be executed in one or more counterparts by the parties by signature of a person having authority to bind the party, which may be by facsimile signature, each of which when



executed and delivered, by facsimile transmission, mail, or email delivery, will be an original and all of which will constitute but one and the same Agreement.

**15.03 Expiration Date.** This Agreement will automatically expire three (3) years from effective date unless it is revised by written notice and mutual agreement.


IN WITNESS WHEREOF, the Parties have caused this agreement to be executed by their duly authorized representatives as follows:

For UMichigan:

  
\_\_\_\_\_  
RYAN LANKTON, JD, MSI  
Project Representative  
Office of Research and Sponsored  
Projects University of Michigan

DATE 6/13/2016

For the U.S. Government:

  
\_\_\_\_\_  
MICHAEL D. WIRT  
Colonel, US Army  
Commanding  
U.S. Army Institute of Surgical Research

DATE 13 June 16

## APPENDIX A STATEMENT OF WORK

**Title:** Analytical Morphomics of Human Torso for Combat Injury Characterization

In an effort to expand collaboration between the US Army Institute of Surgical Research (USAISR) and the University of Michigan (UMichigan), the institutions enter into a cooperative agreement described in the following statement of work. The points of contact for the two institutions are: Stewart C. Wang, MD, PhD, The University of Michigan and Sahar T. Leazer, MD, The US Army Institute of Surgical Research.

**Background:** "Analytical Morphomics" is a term described by Dr. Stewart Wang to characterize the innovative high throughput, highly automated, and anatomically indexed processing of 3D medical imaging data developed to support translational crash research. In analyzing thousands of crash cases it was apparent that occupant characteristics were significantly affecting the severity of incurred injuries. Experience in the civilian crash arena has pinpointed the influence of specific body characteristics on injury outcome following trauma. Morphomics measurements can overcome individual variability and improve by 10 to 100-fold the analytic power in crash study populations. Previous analysis of surgical outcome databases has shown that many of these morphomic factors can significantly predict and affect clinical outcomes of surgical patients following different medical treatments.

These findings can be translated to the military population injured in the battlefield. The result is the development of far more relevant and biofidelic physical test devices and methodologies that engineers need to guide military vehicle and personnel protection countermeasure development. The body composition data collected will also allow for improvements in medical and rehabilitation care for injured warfighters.

One specific application is the development of accurate measurements for aortic and venal caval dimensions based on CT scan images, hemodynamic status, habitus, gender and age in the military population. These findings will help create monograms of correlation for easily identifiable external bony landmarks and internal vascular anatomy. This is necessary to provide fluoroscopy-free insertion in the field. Aortic and vena caval dimensions differ with the hemodynamic status of the injured person as well as their gender, race, body habitus, and age. Better characterization of these differences is necessary to guide optimal field insertion and inflation of occlusive balloon catheters or other hemorrhage control devices for the treatment of battlefield casualties.

CT scans of battlefield casualties stored in the DoDTR at the USAISR will be de-identified then transferred electronically to the UMichigan. The morphomic analysis of the CT scan images provided by the USAISR will be implemented at the UMichigan using the following computer programs: MIMICS, MATLAB, ORACLE, and R for statistical analysis.

**Collaboration:**

The US Army Institute of Surgical Research agrees to:

1. De-identify and electronically transfer CT scans of battlefield casualties stored in the DoDTR to the UMichigan.
2. Share full research protocols and engage in good faith discussions pertaining to experimental design and objectives for the collaborative study designed to address de-identification and analysis of the CT scans provided by the USAISR and the UMichigan.
3. Share research data and engage in good faith discussions pertaining to the interpretation of data from the collaborative study as listed in paragraph 1, above.
4. Work in collaboration to publish results in appropriate peer-reviewed journals as co-authors on all manuscripts generated from analysis.

The University of Michigan agrees to:

1. Perform the morphomic analysis of the CT scan images of battlefield casualties stored in the DoDTR provided by the USAISR.
2. Share full research protocols and engage in good faith discussions pertaining to experimental design and objectives for the collaborative study designed to address de-identification and analysis of the CT scans provided by the USAISR and the UMichigan.
3. Share research data and engage in good faith discussions pertaining to the interpretation of data from the collaborative study as listed in paragraph 1, above.
4. Work in collaboration to publish results in appropriate peer-reviewed journals as co-authors on all manuscripts generated from analysis.

From time to time, USAISR personnel may work in UMichigan's facilities and UMichigan's personnel may work in USAISR's facilities as necessary to accomplish the goals of this collaboration.

# APPENDIX H

## Quad Chart



# Characterization of Human Torso Vascular Morphometry in Normotensive and Hypotensive Trauma Patients

Log. No. 13057165

Award No. W81XWH-14-2-0126

PI: Stewart Wang, MD

Org: University of Michigan

Award Amount: \$1,089,496 Direct

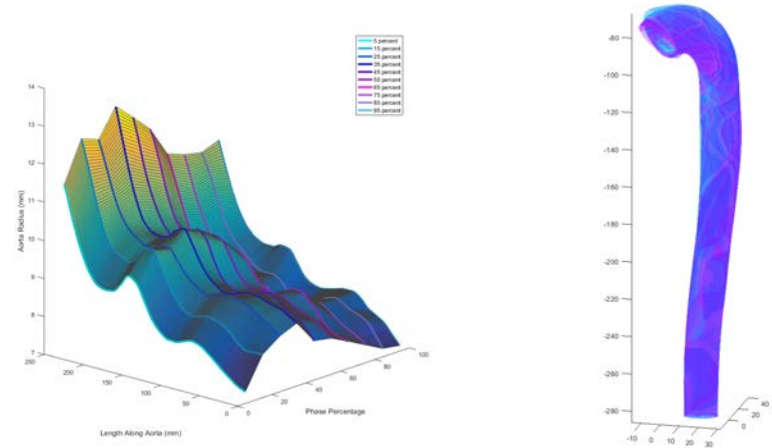


## Study Aims

- Develop accurate measurements for aortic dimensions based on hemodynamic status, body habitus, gender, and age in the civilian population
- Develop accurate measurements for venous dimensions based on hemodynamic status, body habitus, gender, and age in the civilian population
- Translate these findings to the military population and create accurate nomograms for catheter insertion and balloon inflation based on hemodynamic status, body habitus, gender, and age.

## Approach

We are developing a machine learning technique for extracting the aortic structures in a more automated fashion. This entails creating algorithms that search for circular structures in a region of interest and then reference the slices above and below to validate selection.



Phase overlay - All 10 Aorta volumes from different phases overlaid on top of one another  
Gated Radius Graph - Aortic radius as a function of length along the aorta and cardiac phase

## Timeline and Cost

Activities	CY	14	15	16*
Develop accurate measurements for aortic dimensions				
Develop accurate measurements for venous dimensions				
Translate these findings to military population*				
Perform analysis and develop nomograms				
<b>Estimated Budget (\$K) Direct</b>		<b>\$517 K</b>	<b>\$535 K</b>	

\*Applied for No Cost Extension while waiting for Military CT issue to be resolved

## Goals/Milestones

### CY14 Goal – Civilian Population

% Complete	Task
100%	Identify and process civilian base morphomics
100%	Develop aortic and vena cava algorithms
100%	Process vasculature for civilian population
90%	Analyze data and create nomograms

### CY15-16 Goals – Military Population\*

80%	Arrange Access to Military CTs in San Antonio*
0%	Identify 500 Military CTs with Demographics *
0%	Process Base Morphomics for Military Population*
0%	Process Aorta for Military Population*
0%	Process Vena Cava for Military Population*
0%	Validate nomograms*

Comments/Challenges/Issues/Concerns

\* Difficulty obtaining Military CTs has caused a continuing delay